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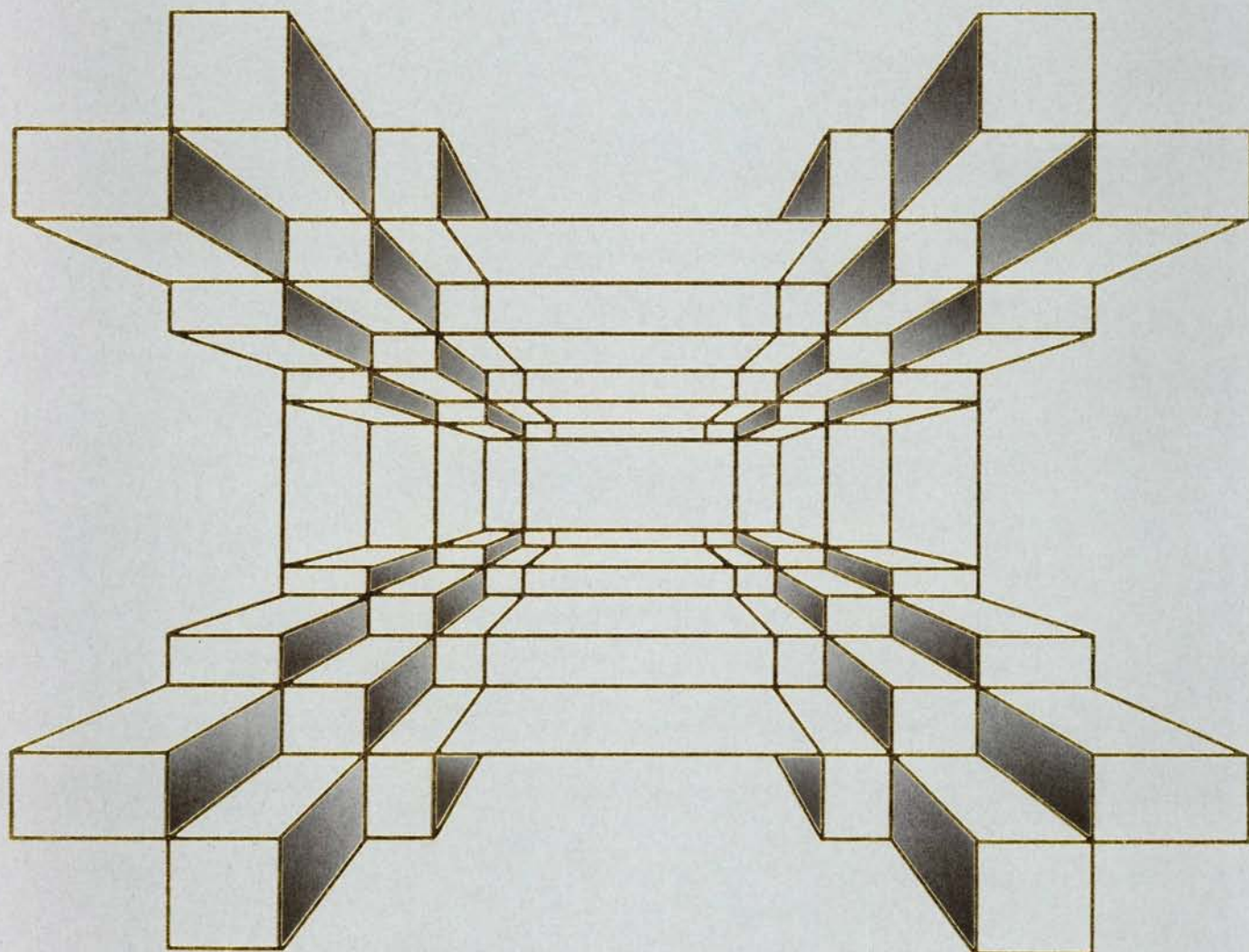
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# BUSINESS OUTLOOK

FOR WEST MICHIGAN



## **Forecast:**

- Capacity Barriers and Tighter Money to Slow Economy

## **Feature Article:**

- Can West Michigan's Quality of Life Be That Bad?

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# **BUSINESS OUTLOOK FOR WEST MICHIGAN**

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*Volume IV, Number 4, Summer 1988*

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# The BUSINESS OUTLOOK

## DISCUSSION PAPER

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### Can West Michigan's Quality of Life Be That Bad?

George A. Erickcek

In the past six months, two studies have been released which rank the quality of life of the nation's metropolitan areas: "New Estimates of Quality of Life in Urban Areas," by Glenn C. Blomquist, Mark C. Berger, and John P. Hoehn, was published by the *American Economic Review*, March 1988, and "The Best Places to Live in America," by Richard Eisenberg and Debra Wishik Englander, appeared in the August issue of *Money*.<sup>1</sup> To the surprise of many residents and the dismay of community leaders, West Michigan's metropolitan areas fared poorly in each. To many, these studies are just more evidence that anything can be proved with statistics.

These studies have not been ignored, however, because quality of life has been identified by a growing number of researchers as an important factor affecting business locations. The residential preferences of management and highly-skilled workers play a role in where their respective firms are locating. In manufacturing, improved transportation and communication networks have allowed firms to be more "footloose" and less tied either to markets or suppliers. In addition, increasing value added in manufactured products has caused transportation costs to decline as a percentage of total cost. In nonmanufacturing, the story is similar: advancements in telecommunications systems permit many service activities to split away from existing corporate headquarters. Simultaneously, firms are demanding more technically-skilled workers to operate their more sophisticated equipment.

This discussion paper reviews these two recent quality of life studies and examines the problems confronted in conducting them. The two studies produced markedly different rankings of the metropolitan areas. While quality of life may be an increasingly important determinant of business location decisions in the 1980s, it remains a difficult and subjective concept to measure. Second, some reasons for West Michigan's poor performance are briefly explored.

#### Current Studies

Blomquist, Berger, and Hoehn examined 253 urban counties and concluded that Pueblo, Colorado has the best quality of life. In contrast, Eisenberg and Englander looked at

300 metropolitan areas and chose Danbury, Connecticut as the best metropolitan area in the nation in which to live. They dropped Pueblo, Colorado far back in the pack, ranking it near the bottom at 260th.

The methodologies used in these two studies are very different. Eisenberg and Englander identified what they believe are the nine major factors that make up an area's quality of life. Then they developed individual rankings for each of these factors and a composite ranking which indicates the overall quality of life.

Blomquist et al. looked at the issue from a different perspective. First, they started with the assumption that currently all people and businesses are optimally located; that is, none could gain significant benefits from relocating. Given this, an area's quality of life can be implicitly measured by its relative wage levels and housing costs. In an area with an excellent quality of life, individuals would be willing to pay more for housing and accept lower wages than an identical location without similar attributes. In Traverse City, for example, it is often said that "the view of the bay is half the pay."

**Table 1**  
**Quality of Life, Top Ten Cities**

<b>Eisenberg &amp; Englander</b>	<b>Blomquist et al.</b>
Danbury, CT	Pueblo, CO
Central New Jersey	Norfolk, VA
Norwalk, CT	Denver, CO
Long Island, NY	Macon, GA
San Francisco, CA	Reno, NV
Nashua, NH	Binghamton, NY
Los Angeles/Long Beach, CA	Newport News, VA
Orange County, CA	Sarasota, FL
Boston, MA	West Palm Beach, FL
Bergen/Passaic Counties, NJ	Tucson, AZ

The authors of these two studies strongly disagree about the quality of life ranking of the nation's metropolitan areas. As shown in Table 1, not one metropolitan area ranked in



the top ten in one of the studies makes the top ten of the other study. Moreover, the two rankings of all metropolitan areas common to both studies are so dissimilar that there is no statistical correlation between them.<sup>2</sup> It is as if the two lists were drawn randomly from a hat containing the names of the cities. Either one of the studies is right and the other wrong, or perhaps both miss the mark.

### **Problems of Measurement**

The surprising dissimilarity between the two rankings suggests that major problems are confronted when attempting to measure an area's quality of life. To accurately measure anything, you must first define what it is. There is no agreement on what determines an area's quality of life, however. In fact an area's quality of life may vary drastically according to individual needs or preferences. For example, older individuals who are retired or nearing retirement will look for different attributes in a community than a young couple will.

Eisenberg and Englander examined the following nine specific categories in their study: crime, housing, health, economy, arts, education, transit, weather, and leisure. Blomquist et al., selected a more limited number of explanatory variables in their quality of life estimates. They did not include variables to account for area differences in the arts, housing, transit, leisure, or economic performance.<sup>3</sup>

### **Data Limitations**

Let's assume that researchers could correctly identify the factors that make up an area's quality of life. They would still be hampered by the lack of appropriate data with which to measure these factors. Often, data are out-of-date, do not precisely measure the desired variable, are not available for the desired area or, worst yet, are not available at all.

Blomquist et al. used the 1980 census of population extensively as part of their data base. While this data source is accurate, it is approaching its 10th birthday. Any improvements or declines in the quality of life since 1980 will, hence, be missing in the analysis.

Other studies have used statewide statistics in place of unavailable or costly metropolitan data. For example, in an earlier quality of life study, a statewide average effective tax rate was used in lieu of the specific property tax rate for each of the metropolitan areas in the state.<sup>4</sup>

Finally, finding any data at all on some of the major components making up an area's quality of life is a nagging problem. Health care, for example, might depend upon the availability of competent health providers and the newest health technology. Information on the competency of doc-

tors or the quality of the equipment available to them in each of the metropolitan areas is, of course, not available. To approximate these factors, other data are substituted, such as the number of teaching hospitals, medical schools, and cardiac rehabilitation centers in the area or in neighboring communities.

It is questionable, however, whether having two medical schools instead of one truly increases the quality of health care in an area. The number of teaching hospitals, for example, may not be as important as the efficiency of the area's emergency care units or county health programs. Unfortunately, given current data restrictions, inadequate data such as the number of teaching hospitals and medical schools, are the only proxies available to estimate an area's quality of health care.

In examining nearly every aspect of an area's quality of life, the available data are rarely adequate to answer the questions being asked.

### **Problem of Determining Weights**

After the factors determining an area's quality of life have been selected and measured, they must be given weights as to their importance. The benefits of a low crime rate must be weighed against good health care, efficient transportation and good schools. These weights are usually estimated statistically or through a survey.

Blomquist et al. developed an econometric model to estimate the weights used in their study. First, they estimated the average effect quality of life variables have in explaining the differences in wages and the housing costs in metropolitan areas, nationwide. Once these national coefficients were developed, the authors applied them to the unique attributes of each metropolitan area to estimate its quality of life.

Eisenberg and Englander based their weights on a small sample of 251 individuals, taken from the list of *Money* subscribers. The three most desired attributes of the readers questioned were a low crime rate, the likelihood that house prices will appreciate and the availability of doctors.

The major difficulty in basing weights on a sample is determining whether it is an unbiased representation of the entire population. *Money* magazine is not for everyone. The reported median age of the subscribers surveyed was 43 and their median household income was \$61,000; both are higher than the nation's, 31.7 years and \$24,897 respectively (1986).

The geographical distribution of a sample is also important in determining how closely it represents the entire population. Individuals may maintain a positive bias toward

the attributes found in their community, If *Money* subscribers are concentrated in the more populated metropolitan areas or in particular regions, e.g., the Northeast or West Coast, then the sample will not be representative of the nation as a whole.

The ranking of attributes which make up a desirable quality of life varies according to income, age, geographical location and other characteristics of the individuals surveyed.

### Why Does West Michigan Do So Poorly?

The rankings received by Michigan's metropolitan areas in both studies are presented in Table 2. Clearly, West Michigan's metropolitan areas did not fare well. None of the five metropolitan areas in West Michigan were able to emerge from the bottom quartile in either study.

**Table 2**  
**Quality of Life Rankings**  
**of Michigan's Metropolitan Areas**

Cities	Eisenberg and Englander	Blomquist et al.*
<b>West Michigan</b>		
Battle Creek	296	176
Benton Harbor	298	n.a.
Grand Rapids	253	183
Kalamazoo	245	184
Muskegon	290	n.a.
<b>Rest of Michigan</b>		
Ann Arbor	67	119
Detroit	71	182
Flint	293	186
Jackson	299	175
Lansing	208	96
Saginaw	239	172
Number of cities in sample	300	188
Median rank	150	94

\*Blomquist et al. developed quality of life rankings for 253 urban counties. Many of these counties are in the same metropolitan areas. When the counties are aggregated according to metropolitan area, quality of life rankings for 188 cities result.

The common local response to these studies is that they are simply wrong, e.g., the studies use incorrect data or erroneous factor weights, as discussed in the previous section. There are many reasons to think that quality of life rankings are therefore unreliable. However, unless you believe researchers have a grudge against West Michigan, there must be other reasons why they seem to agree that its metropolitan areas are not the best places to live. This is especially true since they apparently cannot agree on much of anything else.

Overall, quality of life studies claim that the climate in West Michigan is not ideal; they contend that our summers are too hot and our winters too cold.

Second, Eisenberg and Englander and others argue that West Michigan is too isolated. Unlike their top-rated city, Danbury, CT, which is about 60 miles from New York City, West Michigan residents are too far away from the cultural, health, recreation and transportation facilities which are available to residents living in or near a major larger metropolitan area.

It should be emphasized that Eisenberg and Englander favor large metropolitan areas over smaller ones and small metropolitan areas in near proximity to a larger one over small metropolitan areas which stand alone. For example, Danbury, Connecticut, Central New Jersey, Long Island, New York, and Norwalk, Connecticut, the study's four highest ranked metropolitan areas, are all in the greater New York City area. Furthermore, San Francisco, Los Angeles, Boston, Seattle, Chicago, New York, Pittsburgh, Cleveland, and Houston are all in the top 25. In fact, the 27 top-ranked metropolitan areas are either major cities or part of a greater metropolitan area.

Finally, I would be remiss if I did not discuss a few of the economic factors which are important in evaluating the quality of life in West Michigan. First, the per capita personal incomes earned by the residents in West Michigan metropolitan areas are below the national metropolitan average (see Table 3). Moreover, per capita personal income in our metropolitan areas grew at a slower pace than the nation from 1984 to 1986.

**Table 3**  
**Per Capita Personal Income**

	1984	1986	1986 ranking in U.S.	Percent growth
Battle Creek	11,312	12,634	209	11.7
Benton Harbor	11,485	12,773	200	11.2
Grand Rapids	12,921	14,380	113	11.3
Kalamazoo	12,931	14,425	106	11.6
Muskegon	11,154	12,000	245	7.6
Michigan (Metropolitan)	13,691	15,662		14.4
United States (Metropolitan)	13,977	15,642		11.9

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis.

Second, employment growth in our metropolitan areas is below that of the nation, as shown in Table 4. Specifically, in the past 10 years from 1978 to 1987, employment

growth was below the national average in West Michigan's metropolitan areas except in Grand Rapids.

**Table 4**  
**Percentage Change in Total Employment**  
**in the Business Cycle**

	1978-1982 (peak to trough)	1982-1987 (trough to peak)	1978-1987 (peak to peak)
Battle Creek	-14.3	14.4	-1.9
Benton Harbor	-12.8	20.8	5.3
Grand Rapids	2.6	13.4	16.4
Kalamazoo	-4.0	16.6	11.9
Muskegon	-7.4	7.5	-0.5
West Michigan*	-3.3	14.2	10.5
Michigan	-7.5	14.9	6.3
United States	3.6	13.0	17.1

SOURCE: Michigan Employment Security Commission.

\*Employment growth in the five metropolitan areas listed above.

Finally, West Michigan employment growth is more cyclical than the nation as a whole. During the national downturn from 1978 to 1982, the metropolitan areas in West Michigan, except Grand Rapids, suffered employment declines in spite of national job growth of 3.6 percent. During the current recovery (1982 to 1987), however, West Michigan, except for Muskegon, has outpaced the nation in job growth (Table 4). This cyclicity is not viewed favorably in some quality of life studies.

### Conclusion

I once heard a business consultant state, "Our office is in Petoskey, Michigan because we like it there." More and more service firms and an increasing number of manufacturing firms do have the ability to locate where the owner or workers want. The quality of life of an area is becoming more important in determining its economic future. In fact, the quality of life and the availability of skilled labor are interrelated. After all, well-trained workers can be selective in choosing where they want to live.

Researchers, however, have been unable to agree on what factors make up an area's quality of life, how to measure them, or how to weight them. In fact, it may turn out that the concept itself is too subjective to objectively analyze. Even if better information and more advanced methodologies become available, quality of life rankings will surely remain hotly contested by researchers and policymakers alike.

West Michigan is not as bad as portrayed in these studies. One can point to its many recreational opportunities, small town atmosphere, and, more important, the general satisfaction of its residents to show that West Michigan is an attractive place to live for many people. Moreover, in the last decade employment in West Michigan has grown at almost double the rate of the State of Michigan.

There is room for improvement, however. This report highlighted the economic component of West Michigan's quality of life and showed that West Michigan's per capita personal income and employment growth are below the national average. More careful study of all the components of West Michigan's quality of life would provide local residents with a better understanding of their region than can be gained by simply criticizing national rankings.

### NOTES

1. There are many other published rankings of the business climate or quality of life. The best known, perhaps, is the hotly-contested annual report by Grant Thornton, which ranks states according to their manufacturing business climate. Another one is *INC* magazine's annual ranking of cities as to their business environment for entrepreneurs and small business development. The two studies examined in this report are different, however, in that they examine an area's overall quality of life, not just its climate for business.
2. There are 181 metropolitan areas common to both studies. The Spearman rank correlation coefficient was calculated to measure whether the high- (low-) ranking metropolitan areas in the Blomquist et al. study are associated with the high- (low-) ranking areas in the Eisenberg and Englander article. Surprisingly, the coefficient proved to be negative (-0.164), although not statistically significant.
3. The way Blomquist et al. define an area's quality of life, it is possible that an increase in an area's economic performance (higher wages) and a decrease in its housing costs may LOWER its quality of life. The Eisenberg and Englander study, on the other hand, would evaluate these changes as being positive to the area's quality of life.
4. Richard Boyer and David Savageau, *Places Rated Almanac* (Chicago: Rand McNally and Company, 1986), p. 77.

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# The BUSINESS OUTLOOK for WEST MICHIGAN

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## Capacity Barriers and Tighter Money to Slow Economy

George A. Erickcek

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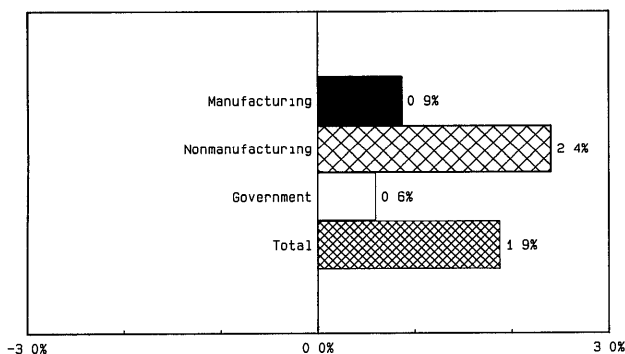
Spurred by a healthy 1.1 percent increase in nonmanufacturing employment, total employment in West Michigan grew 0.8 percent in the second quarter of 1988. Manufacturing employment rose a modest 0.3 percent and government employment increased 0.7 percent. Statewide, employment rebounded from a 1.4 percent decline in the first quarter to grow 0.7 percent in the second quarter. Further employment growth can be expected statewide; however, in West Michigan, as well as the nation, capacity barriers and a tighter monetary policy may slow the expansion.

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### *The National Setting*

The Gross National Product (GNP) grew at a healthy 3.3 percent annual rate in the second quarter of 1988. Increased capital expenditures and improved trade figures pushed the economy upwards, in spite of meager growth in consumer expenditures and abnormally low, drought-stricken agricultural output. The GNP's second-quarter performance was only slightly below its first quarter pace of 3.4 percent.

**Chart 1**  
**United States Employment**  
**Percentage Change, Second Quarter 1988**



SOURCE: Based on U.S. Department of Labor data.

Consumer spending grew at a modest 2.7 percent annual growth rate in the second quarter, down from its strong 4.5 percent showing in the first quarter. The pace of consumer spending on both durable and nondurable goods fell sharply from the previous quarter, while expenditures on services kept stride with last quarter's performance.

The decline in the rate of growth in consumer spending was partially the result of a substantial slowdown in the growth of disposable personal income. In the second quarter, disposable personal grew just 0.3 percent, a drastic reduction from the strong 5.0 percent annual rate recorded in the first quarter.

The slower pace of consumer spending improved our balance of trade, however, as consumer imports dropped dramatically. All imports fell at a 3.6 percent annual rate, in sharp contrast to the first quarter expansion of 6.9 percent. Exports grew at a 11.6 percent annual rate in the second quarter, down from their remarkable 25.7 percent rate recorded in the first quarter. Overall, our foreign trade deficit improved in the second quarter; net exports of goods and services declined by just \$90.1 billion, up from a \$109.0 billion decline in the first quarter.

The Department of Commerce estimates that the reduction in farm output caused by the drought has lowered GNP growth by a full percentage point so far. The nation's corn and soybean crops are expected to be slashed 37 and 23 percent, respectively, as a result of the drought.

The nation's industries continue to expand production capacity. Fixed nonresidential investment jumped to a 16.3 percent annual growth rate in the second quarter. Expenditures on structures rebounded to a 12.1 percent growth rate, after falling 22.4 percent in the first quarter. The pace of capital equipment expenditures maintained a healthy 17.9 percent annual rate of growth, falling from a high 21.6 percent pace set in the first quarter.

**Table 1**  
**Michigan (Statewide) Statistics**  
(Adjusted for seasonal variations)

Measure	1988 second quarter	1988 first quarter	Percent change first to second	1987 second quarter	Percent change second to second
Employment:					
Manufacturing .....	934,070	930,810	0.4	973,270	-4.0
Nonmanufacturing .....	2,187,250	2,167,690	0.9	2,093,420	4.5
Government .....	625,610	624,100	0.2	603,240	3.7
Total .....	3,746,930	3,722,600	0.7	3,669,930	2.1
Unemployment:					
Number unemployed .....	320,490	395,250	-18.9	384,550	-16.7
Unemployment rate .....	7.1	8.8	-1.7	8.5	-1.5
State indexes:					
Help-wanted ads:					
Detroit .....	173	168	3.0	170	1.8
West Michigan (5 MSAs) .....	290	278	4.3	262	10.7
Leading indicators (statewide) .....	156	147	6.1	152	2.6
State components:					
Average weekly hours .....	43.6	42.3	3.2	42.0	4.0
UI initial claims .....	16,505	18,785	-12.1	17,998	-8.3
New dwelling units <sup>a</sup> .....	49,104	44,496	10.4	49,720	-1.2

SOURCES: W. E. Upjohn Institute for Employment Research. Based on dwelling data from F. W. Dodge Division, McGraw Hill Information Systems Company, help-wanted index from The Conference Board and employment data from Michigan Employment Security Commission. National components in Table A-3.

a. New dwelling unit data are seasonally adjusted annual rates.

**Table 2**  
**West Michigan (5 MSAs) Statistics**  
(Adjusted for seasonal variations)

Measure	1988 second quarter	1988 first quarter	Percent change first to second	1987 second quarter	Percent change second to second
Employment:					
Manufacturing .....	181,550	181,090	0.3	177,030	2.6
Nonmanufacturing .....	346,480	342,590	1.1	328,570	5.5
Government .....	77,870	77,300	0.7	75,860	2.6
Total .....	605,900	600,980	0.8	581,460	4.2
Unemployment:					
Number unemployed .....	36,910	46,650	-20.9	46,570	-20.7
Unemployment rate .....	5.4	7.0	-1.6	7.1	-1.7
Local indexes:					
Help-wanted ads .....	290	278	4.3	262	10.7
Leading indicators .....	145	145	0.0	147	-1.4
Local components:					
Average weekly hours .....	41.8	41.2	1.5	40.5	3.1
UI initial claims .....	2,255	2,351	-4.1	2,194	2.8
New dwelling units <sup>a</sup> .....	7,303	8,320	-12.2	8,371	-12.8

SOURCES: W. E. Upjohn Institute for Employment Research. Based on dwelling data from F. W. Dodge Division, McGraw Hill Information Systems Company, ad counts from five daily newspapers and employment data from Michigan Employment Security Commission. National components in Table A-3.

a. New dwelling unit data are seasonally adjusted annual rates.

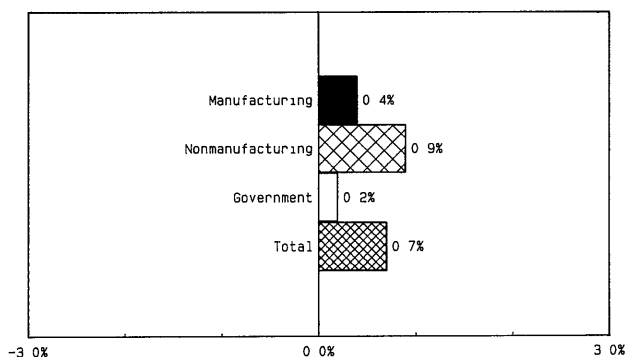
In June, the nation's manufacturers, mines, and utilities operated at 83.1 percent of capacity, the highest monthly rate of utilization in more than eight years. Although the quality of capacity estimates has been questioned by some, this series developed by the Federal Reserve Board identifies a clear trend toward full capacity. Primary metals, aerospace, textiles, paper, chemicals and plastics industries were all operating at over 85 percent of capacity. In both May and June, the nation's auto producers were working at 75.3 percent of capacity.

The nation's purchasing managers are facing higher prices and slower vendor deliveries, due to industries reaching capacity constraints. In its July national survey, the National Association of Purchasing Managers found that 63 percent of firms surveyed confronted rising prices, while only 4 percent enjoyed faster vendor deliveries. Respondents reported price increases in 35 commodities and a price decrease only in fuel oil.

With the nation's industries working overtime and the national unemployment rate dropping to a 14-year low of 5.3 percent in June (5.4 percent in July), the economy is experiencing some inflationary pressures. Consumer prices rose at a 4.1 percent annual rate in the second quarter, and the GNP deflator, a broader measure of inflation, grew at a 5.1 percent annual rate in the second quarter.

Recently, the Federal Reserve Board (FED) increased its discount rate (the rate the FED charges on loans to financial institutions) from 6 to 6.5 percent in a preemptive move designed to cool the economy down before an inflationary spiral ignites. Almost immediately, the prime interest rate at major commercial banks jumped from 9.5 percent to 10 percent. In January, the prime was at 8.5 percent.

**Chart 2**  
**Michigan Employment**  
**Percentage Change, Second Quarter 1988**



SOURCES: Based on U.S. Department of Labor and Michigan Employment Security Commission data.

Higher interest rates may reduce growth in several sectors of the economy. First, the interest-sensitive housing market may face a slowdown. As of the second week in August, the prevailing rate on fixed term, 30-year mortgages was already at 10.82 percent, up dramatically from 9.74 percent in mid-February. Second, higher prime rates will trigger increased interest rates on home equity loans, adjustable rate mortgages (ARMs), and consumer credit accounts, which could cool consumer spending. Finally, higher interest rates will tend to strengthen our already improving dollar and possibly harm our improved balance of trade. Higher interest rates and a strengthened dollar could attract further foreign investment in the U.S., increase the cost of our exports, and lower prices on imports.

Most economists are still upbeat, however, and view the FED's action as a minor adjustment rather than a dousing. The Department of Commerce composite index of leading economic indicators rose 1.4 percent in June, the biggest increase since December 1986. Furthermore, the contributors to the *Blue Chip Economic Indicators* have revised their consensus forecast for 1988 upwards to a strong 3.8 percent.

### *The State of Michigan*

The state's economy is slowly recovering from last year's auto layoffs. Total employment grew a healthy 0.7 percent in the second quarter and manufacturing employment increased 0.4 percent. In the previous quarter, state employment fell 1.4 percent and manufacturing employment lurched downward by 3.0 percent. Employment in nonmanufacturing is maintaining its stable course, growing 0.9 percent this quarter on top of a 0.8 percent increase in the previous quarter. Government employment grew a modest 0.2 percent in the second quarter.

The state's unemployment rate fell sharply to 7.1 percent in the second quarter from 8.8 percent in the first quarter of 1988.

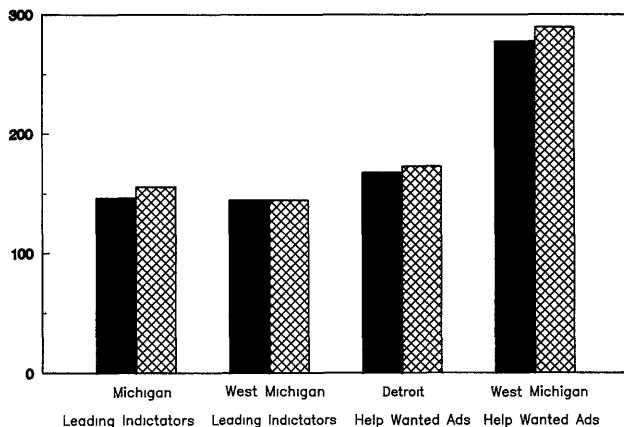
The state's Index of Leading Indicators rose 6.1 percent, and all three statewide components improved in the second quarter. Average weekly hours of production workers increased 3.2 percent over the first quarter's modest decline of 0.8 percent. The number of initial claims for unemployment insurance dropped 12.1 percent, after climbing 19.2 percent in the previous quarter. Finally, the number of new dwelling units put under contract rose 10.4 percent, fully recovering from its 9.0 percent decline in the first quarter.

The Detroit Help-Wanted Advertising Index was also up in the second quarter, rising 3.0 percent. In the first quarter, the Index fell 1.2 percent.

The turnaround in both Indexes suggests further employment growth for the state in the coming months. The state

should continue to benefit from increased business investment, nationwide, and increased exports.

**Chart 3**  
**Michigan and West Michigan Indexes**  
First Quarter ■ 1988 and Second Quarter ▨ 1988  
(1982=100)



The domestic output of new autos increased markedly in the second quarter, rising from the first quarter's annual rate of \$74.2 billion to a rate of \$85.6 billion in the second quarter. Sales of imported autos declined slightly from an annual rate of \$50.7 billion in the first quarter to \$50.5 billion in the second. Given that current incentive programs are not as generous as last year's, this year's auto output figures are a welcome sign, not only to the state's reduced auto assembly sector, but also to its large auto parts industry.

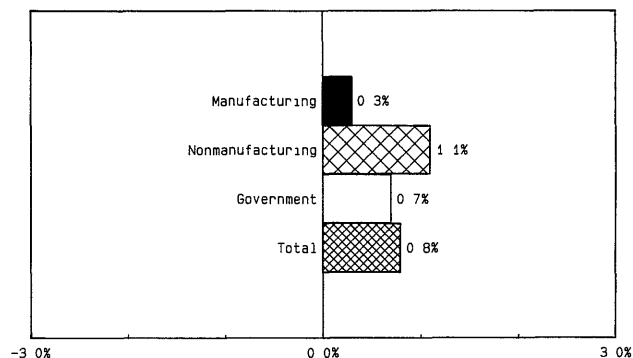
#### Outlook for West Michigan

*Total employment in West Michigan grew 0.8 percent in the second quarter, down slightly from the first quarter's 1.1 percent rate of growth. Overall, we foresee further employment growth in West Michigan in the coming months, especially in the nonmanufacturing sector.*

Nonmanufacturing employment grew a healthy 1.1 percent in the second quarter. In the first-quarter nonmanufacturing grew an even stronger 1.7 percent. Employment in manufacturing increased 0.3 percent in the second quarter, short of its first-quarter growth of 0.7 percent. Government employment rose 0.7 percent, recovering from its 0.6 percent decline in the previous quarter.

The unemployment rate for the five metropolitan areas in West Michigan plunged to 5.4 percent in the second quarter, dropping below the national rate for the first time since 1978. West Michigan's unemployment rate has dropped 1.7 percentage points in the past four quarters.

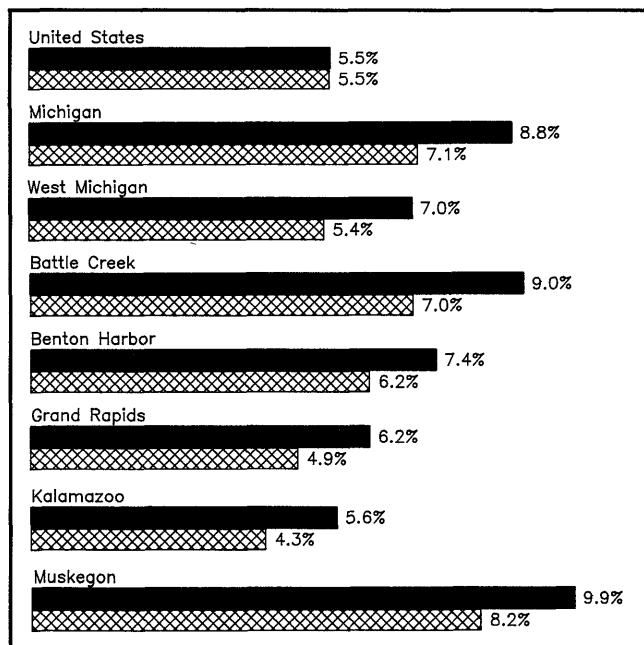
**Chart 4**  
**West Michigan Employment**  
Percentage Change, Second Quarter 1988



SOURCE: Based on Michigan Employment Security Commission data for 5 MSAs in West Michigan.

West Michigan's Index of Leading Indicators was flat in the second quarter. Average weekly hours of production workers grew 1.5 percent, rebounding from its 0.5 percent drop in the first quarter. Moreover, the number of initial claims for unemployment insurance fell 4.1 percent. A sharp 12.2 percent drop in the number of new dwelling units put under contract erased the improvements of the other two local components, however. The decline in construction activity was centered in the Grand Rapids MSA.

**Chart 5**  
**Unemployment Rates**  
First Quarter ■ 1988 and Second Quarter ▨ 1988





The Index of Help-Wanted Advertising for West Michigan climbed 4.3 percent in the second quarter. Over the past four quarters, the West Michigan Help-Wanted Index has increased 10.7 percent, compared to a 1.8 percent increase in the Detroit Index and a 5.0 percent increase in the National Index.

West Michigan's businesses are facing higher prices and longer lead times from their vendors, just as their national counterparts are. In the July survey of area purchasing managers by the Purchasing Management Association of

Southwestern Michigan, Inc., 78 percent reported higher prices for major commodities and 79 percent faced longer lead times for delivery from their vendors.

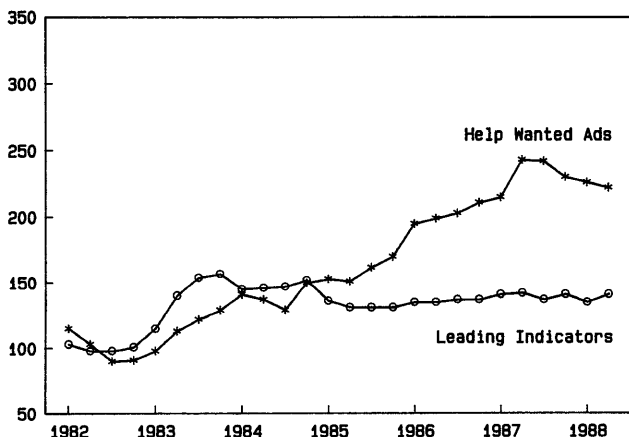
Recently, economic developers from Battle Creek, Holland, and Grand Rapids teamed up to promote West Michigan to foreign investors at the Midwest Export-Investment Center in Chicago. We applaud such joint efforts and feel strongly that much can be gained by working together in promoting the unique advantages of West Michigan.

# The BUSINESS OUTLOOK for the BATTLE CREEK MSA

*Total employment rose a modest 0.5 percent in the Battle Creek MSA. Strong employment growth in nonmanufacturing offset declines in the manufacturing sector. We expect employment in manufacturing, however, to improve in the coming months.*

Nonmanufacturing employment grew a healthy 0.9 percent in the second quarter, on top of an outstanding 3.0 percent jump in the first quarter. Government employment grew 0.5 percent, offsetting a 0.3 percent decline suffered in the previous quarter. Employment in manufacturing continued to slide, however, falling 0.5 percent in the second quarter. Since the beginning of the year, manufacturing employment has dropped 1.3 percent.

**Chart BC-1**  
**Battle Creek Indexes**  
**by Quarter - First of 1982 to Second of 1988**  
(1982=100)



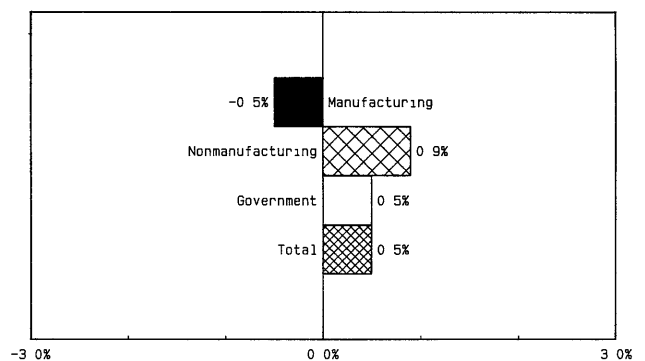
The area's unemployment rate dropped to 7.0 percent in the second quarter, which is a marked improvement over the 8.0 percent rate recorded in the second quarter of 1987.

The area's Index of Leading Indicators rose 4.4 percent in the second quarter, after falling 5.0 percent in the previous quarter. Such a strong jump in the Index suggests that manufacturing employment will improve in the coming months.

The local components of the Index were mixed. The number of dwelling units put under contract grew an outstanding 22.9 percent. The number of initial unemployment insurance claims plunged 12.9 percent, nearly making up

for its 15.2 percent rise in the first quarter. Finally, the average weekly hours of production workers dropped for the second straight quarter, falling 1.2 percent.

**Chart BC-2**  
**Battle Creek Employment**  
**Percentage Change, Second Quarter 1988**



SOURCE: Based on Michigan Employment Security Commission data. Seasonally adjusted by the Institute.

The Index of Help-Wanted Advertising continued its downward slide, falling 1.8 percent in the second quarter. The area's Index of Help-Wanted Advertising has dropped a serious 10.5 percent over the last four quarters. Although nonmanufacturing has been the leader in employment growth, it is questionable whether it will continue to do so.

If construction plans hold firm, classes should start in the fall of 1989 at the new Fort Custer Center for Productivity and Innovation. The 40,000 square foot, \$4.2 million center is designed to fill the gap between current training programs at existing public institutions and the specialized training needs of the area's manufacturers. Area companies may supply their own instructors to conduct many of the training programs with the coordination of Kellogg Community College, the Calhoun Area Vocational Center and other institutions.

Robinson Department Store, the last in Battle Creek's downtown, will remain open due to efforts by the greater Battle Creek Foundation. Controlling interest of the store was transferred to the Foundation and it is now seeking community cooperation and support in keeping the store open.

The Foundation's task will not be made any easier with the announcement of the planned construction of a 400,000 square foot shopping center. Named the Minges Brook Mall, the new facility is to be located on Beckley Road and is

tentatively set to have Target and Mervyns department stores as anchors. A similar proposal was announced at the first of the year; however, a retail anchor had not been secured at that time.

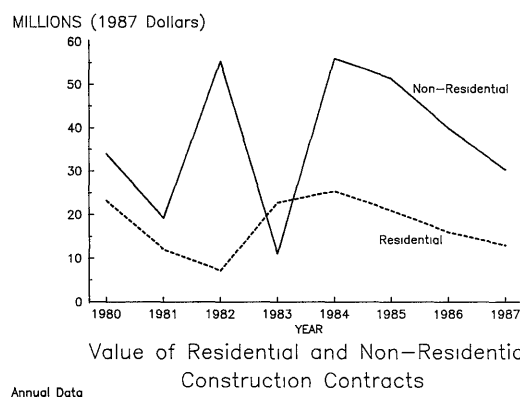
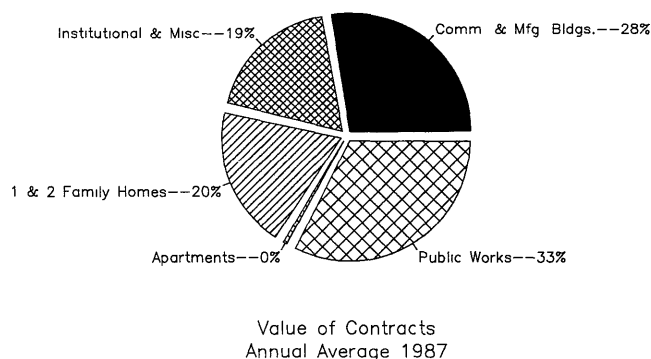
**Table BC-1**  
**Battle Creek (Calhoun County) Statistics**  
(Adjusted for seasonal variations)

Measure	1988 second quarter	1988 first quarter	Percent change first to second	1987 second quarter	Percent change second to second
<b>Employment:</b>					
Manufacturing .....	15,250	15,330	-0.5	15,410	-1.0
Nonmanufacturing .....	30,920	30,640	0.9	28,790	7.4
Government .....	11,500	11,440	0.5	11,530	-0.3
Total .....	57,670	57,410	0.5	55,730	3.5
<b>Unemployment:</b>					
Number unemployed .....	4,470	5,800	-22.9	5,000	-10.6
Unemployment rate .....	7.0	9.0	-2.0	8.0	-1.0
<b>Local indexes:</b>					
Help-wanted ads .....	222	226	-1.8	248	-10.5
Leading indicators .....	141	135	4.4	141	0.0
<b>Local components:</b>					
Average weekly hours ....	41.8	42.3	-1.2	42.9	-2.5
UI initial claims .....	306	352	-12.9	309	-0.9
New dwelling units <sup>a</sup> .....	186	152	22.9	182	2.6

SOURCES: W.E. Upjohn Institute for Employment Research. Based on dwelling data from F.W. Dodge Division, McGraw Hill Information Systems Company, ad count from *Battle Creek Enquirer* and employment data from Michigan Employment Security Commission. National components in Table A-3.

a. New dwelling unit data are seasonally adjusted annual rates.

### Construction Activity



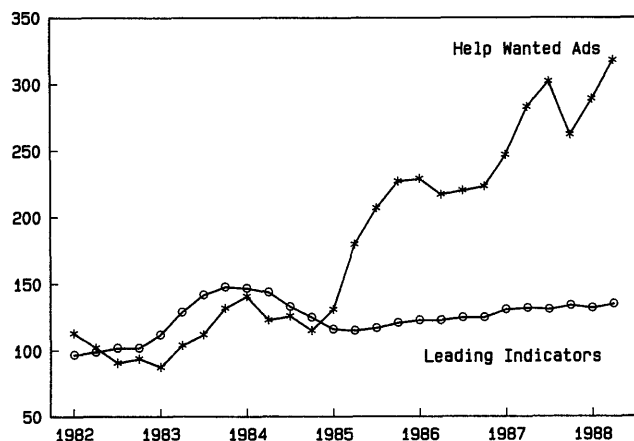
Values of nonresidential construction contracts have fluctuated widely from peaks of \$55 million in 1982 and 1984 to a bottom of \$11 million in 1983, with a recent low of \$30 million in 1987. Residential construction values have remained less volatile, falling to \$7 million in 1982, climbing to \$25 million in 1984, and dropping again to \$13 million in 1987. In 1987 public works led the construction industry with a 33 percent share of contracts let, with commercial and manufacturing construction at 28 percent. One- and two-family homes held a 20 percent share, institutional a 19 percent share and, interestingly, there were no apartments put under contract.

# The BUSINESS OUTLOOK for the BENTON HARBOR MSA

Total employment rose a scant 0.2 percent in the Benton Harbor MSA. Healthy employment growth in nonmanufacturing countered a drop in manufacturing employment. We foresee stronger employment growth in both the manufacturing and nonmanufacturing sectors in the coming months.

Employment in nonmanufacturing jumped 1.2 percent in the second quarter, on top of a 0.2 percent increase in the first quarter. Employment in the area's nonmanufacturing sector has increased a strong 5.2 percent over the past four quarters.

**Chart BH-1**  
**Benton Harbor Indexes**  
**by Quarter - First of 1982 to Second of 1988**  
(1982=100)



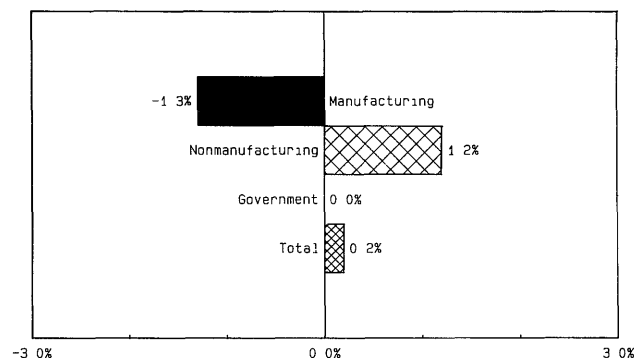
Employment in manufacturing, however, dropped 1.3 percent in the second quarter, following a 0.4 percent decline in the first quarter. Electrical machinery suffered major employment losses, as its workforce declined 15.7 percent in the 12-month period ending in June.

Government employment remained constant in the second quarter after falling a slight 0.2 percent in the first quarter.

The area's unemployment rate fell to 6.2 percent in the second quarter, which is a substantial improvement over the 8.0 percent rate recorded four quarters ago.

The area's Index of Leading Indicators rose 2.3 percent in the second quarter, suggesting a modest turnaround in manufacturing employment in the coming months.

**Chart BH-2**  
**Benton Harbor Employment**  
**Percentage Change, Second Quarter 1988**



SOURCE: Based on Michigan Employment Security Commission data Seasonally adjusted by the Institute.

The local components of the Index were mixed. Average weekly hours of production workers rose 0.6 percent, after jumping a full 3.0 percent in the previous quarter. The number of initial claims for unemployment insurance, however, grew 3.0 percent, on top of a large 12.5 percent jump in the first quarter. Finally, the number of new dwellings put under contract rose 6.9 percent in the second quarter.

The area's Index of Help-Wanted Advertising shot up 10.0 percent in the second quarter and has climbed 15.2 percent in the past year. Healthy employment growth in the area's nonmanufacturing sector should continue in the coming months.

Harland Bartholomew and Associates, as part of their effort to prepare a master plan for the Benton Harbor/St. Joseph area, identified recreation and tourism, technology-based manufacturing, and agricultural services processing as holding good economic potential for the area. The consultants also released a list of needed infrastructure improvements in the area, including road repair, construction of a trunk sewer line to serve portions of Benton Township, and repair of Benton Harbor's sewer system.

Western Michigan University is expanding its service to the Benton Harbor area by offering a bachelor's degree program in production technology through its Southwest Regional Center at Lake Michigan College this coming fall.

Currently, WMU offers bachelor's degree programs in health studies and liberal arts and master's degree programs in

mechanical and electrical engineering at Lake Michigan College.

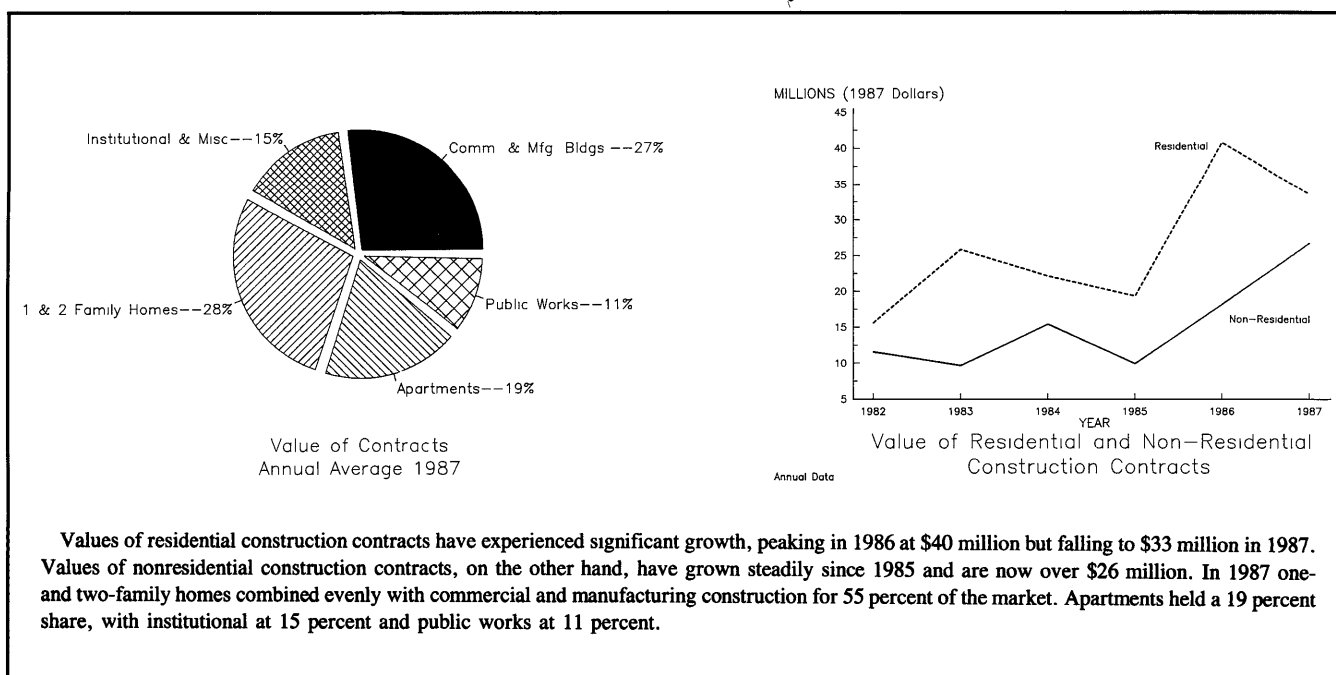
**Table BH-1**  
**Benton Harbor (Berrien County) Statistics**  
(Adjusted for seasonal variations)

Measure	1988 second quarter	1988 first quarter	Percent change first to second	1987 second quarter	Percent change second to second
<b>Employment:</b>					
Manufacturing . . . . .	21,100	21,380	-1.3	21,180	-0.4
Nonmanufacturing . . . . .	34,760	34,340	1.2	33,040	5.2
Government . . . . .	8,520	8,520	0.0	8,490	0.4
Total . . . . .	64,380	64,240	0.2	62,710	2.7
<b>Unemployment:</b>					
Number unemployed . . . . .	4,840	5,700	-15.1	6,080	-20.4
Unemployment rate . . . . .	6.2	7.4	-1.2	8.0	-1.8
<b>Local indexes:</b>					
Help-wanted ads . . . . .	318	289	10.0	276	15.2
Leading indicators . . . . .	135	132	2.3	132	2.3
<b>Local components:</b>					
Average weekly hours . . . .	41.4	41.2	0.6	39.7	4.5
UI initial claims . . . . .	260	253	3.0	235	10.6
New dwelling units <sup>a</sup> . . . . .	410	384	6.9	305	34.5

SOURCES: W. E. Upjohn Institute for Employment Research. Based on dwelling data from F.W. Dodge Division, McGraw Hill Information Systems Company, ad count from *Benton Harbor Herald Palladium* and employment data from Michigan Employment Security Commission. National components in Table A-3.

a. New dwelling unit data are seasonally adjusted annual rates.

## Construction Activity

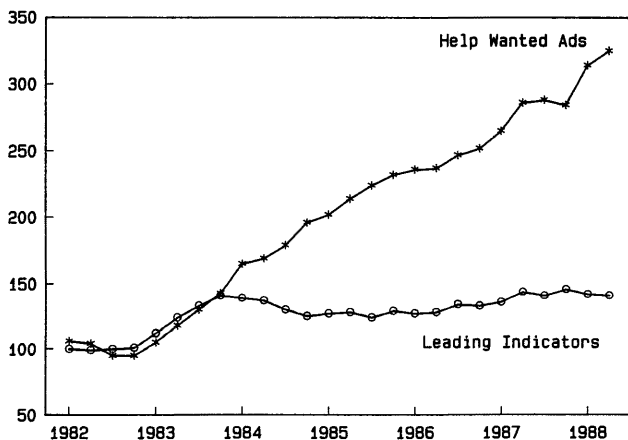


# The BUSINESS OUTLOOK for the GRAND RAPIDS MSA

*Total employment in the Grand Rapids MSA (Kent and Ottawa Counties) grew a healthy 1.2 percent. Further employment growth in nonmanufacturing should occur, while employment growth in manufacturing may slow.*

Employment in nonmanufacturing grew a strong 1.4 percent in the second quarter, on top of an outstanding 2.3 percent increase recorded in the first quarter. In the past year, nonmanufacturing employment has grown 7.0 percent. Employment in manufacturing increased a healthy 1.0 percent in the second quarter and has increased 4.6 percent over the past four quarters. Government employment grew a modest 0.5 percent in the second quarter.

**Chart GR-1**  
**Grand Rapids Indexes**  
**by Quarter – First of 1982 to Second of 1988**  
(1982=100)



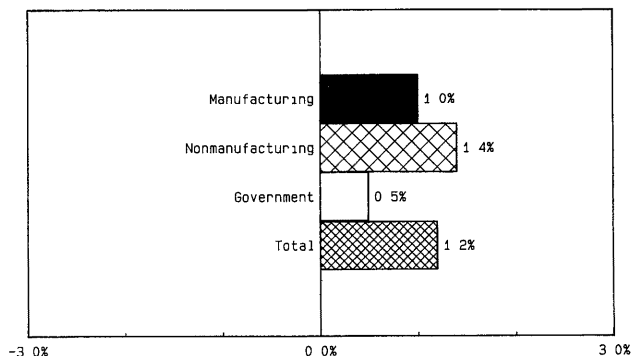
The area's unemployment rate fell to 4.9 percent in the second quarter, dropping below the national average. Over the past four quarters, the area's unemployment rate has dropped 1.7 percentage points.

The area's Index of Leading Indicators declined a slight 0.7 percent in the second quarter. Further employment growth in manufacturing is still expected in the coming months, but at a slower pace.

The Index fell because of a substantial 16.2 percent decline in the number of new dwelling units put under contract. The

other two local components of the Index improved, however: average weekly hours of production workers rose 2.3 percent and the number of initial claims for unemployment insurance fell 3.7 percent.

**Chart GR-2**  
**Grand Rapids Employment**  
**Percentage Change, Second Quarter 1988**



SOURCE: Based on Michigan Employment Security Commission data. Seasonally adjusted by the Institute.

Recent events in the area's manufacturing sector support the Index's marginal performance. C&F Stamping announced plans to build a \$29 million "fail safe" manufacturing plant, which will make plastic front-end parts for Toyota and General Motors. The plant will eventually employ 200 workers. On the other hand, Reynolds Metals announced the closing of its Wyoming aluminum extrusion plant, eliminating 336 jobs.

The area's Index of Help-Wanted Advertising rose 3.6 percent in the second quarter. Over the past four quarters, the Index has climbed 15.8 percent. Employment opportunities in nonmanufacturing should continue to expand, but as the area approaches full employment the question arises as to whether there will be enough qualified individuals to fill these positions.

The area's office furniture industry has been a driving force in creating new jobs and is positioning itself for further growth in the international marketplace. Local employment in the industry increased by 1,100 workers in the year ending in June. In Holland, Haworth Inc. broke ground on its \$33 million expansion project, including the construction

of a 295,000 square foot manufacturing facility for the production of wood furniture which will employ 150 workers upon completion. In other developments, Westinghouse Furniture Systems reached an agreement with Komatsu Wall Industry Co. to sell furniture in the Japanese market.

American Seating agreed to buy Pacific/Condi Furniture Manufacturing Company, a Los Angeles-based firm. Finally, Steelcase announced that its annual sales, ending in February, were 7.8 percent above last year's and that they are in the process of designing a new line of office furniture.

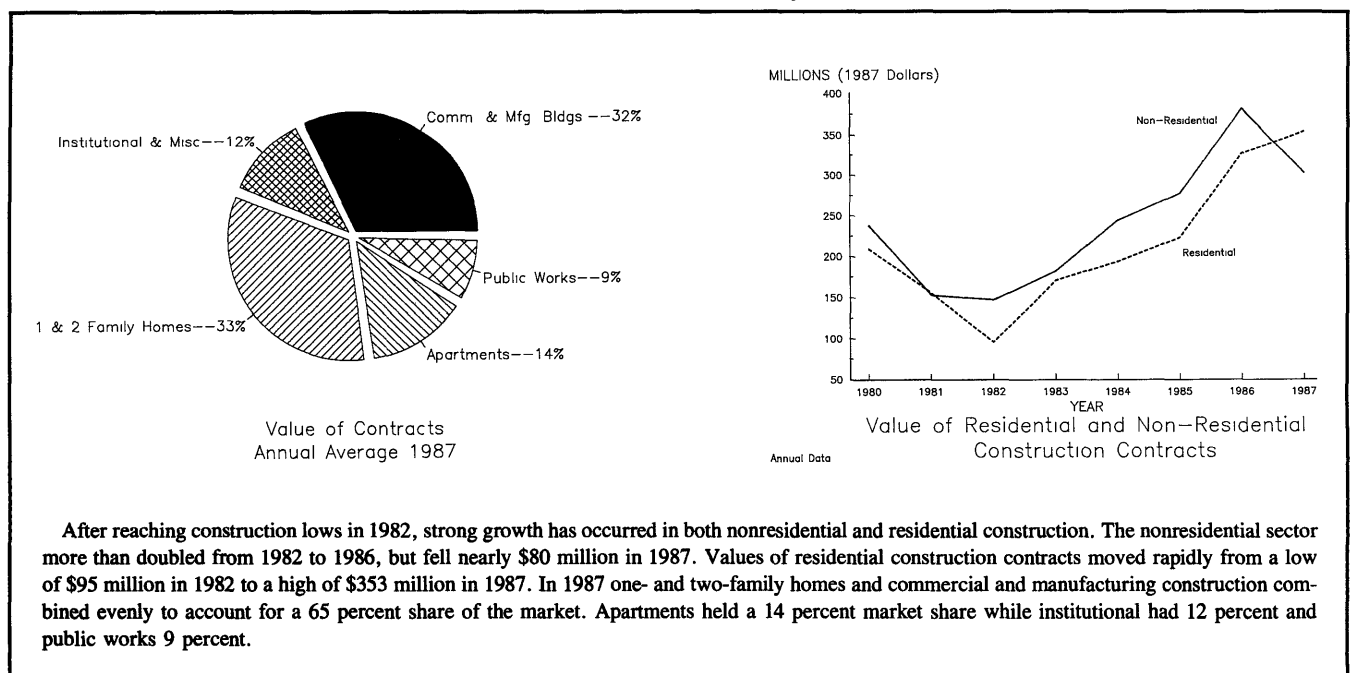
**Table GR-1**  
**Grand Rapids (Kent & Ottawa Counties) Statistics**  
(Adjusted for seasonal variations)

Measure	1988 second quarter	1988 first quarter	Percent change first to second	1987 second quarter	Percent change second to second
<b>Employment:</b>					
Manufacturing .....	97,950	96,990	1.0	93,620	4.6
Nonmanufacturing .....	191,720	189,160	1.4	179,120	7.0
Government .....	31,540	31,390	0.5	30,890	2.1
Total .....	321,210	317,540	1.2	303,630	5.8
<b>Unemployment:</b>					
Number unemployed .....	17,220	21,640	-20.4	22,080	-22.0
Unemployment rate .....	4.9	6.2	-1.4	6.6	-1.7
<b>Local indexes:</b>					
Help-wanted ads .....	325	314	3.6	281	15.8
Leading indicators .....	141	142	-0.7	143	-1.4
<b>Local components:</b>					
Average weekly hours ....	41.6	40.7	2.3	39.6	5.2
UI initial claims .....	1,060	1,101	-3.7	962	10.2
New dwelling units <sup>a</sup> .....	5,094	6,082	-16.2	5,949	-14.4

SOURCES: W. E. Upjohn Institute for Employment Research. Based on dwelling data from F.W. Dodge Division, McGraw Hill Information Systems Company, ad count from *Grand Rapids Press* and employment data from Michigan Employment Security Commission. National components in Table A-3.

a. New dwelling unit data are seasonally adjusted annual rates.

### Construction Activity



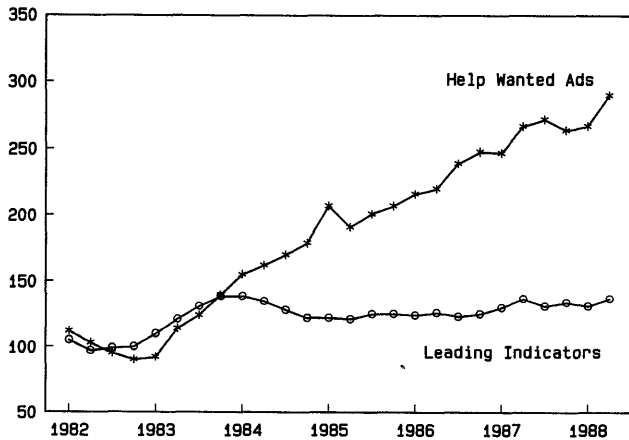


# The BUSINESS OUTLOOK for the KALAMAZOO MSA

Total employment in the Kalamazoo MSA grew a moderate 0.7 percent in the second quarter of 1988. In spite of an already low level of unemployment, we foresee further employment growth in both the nonmanufacturing and manufacturing sectors in the coming months.

Employment in government rose a strong 2.2 percent in the second quarter, after falling 0.5 percent in the first quarter. Nonmanufacturing employment grew a moderate 0.4 percent, on top of a 0.9 percent increase in the previous quarter. Finally, manufacturing employment increased 0.5 percent in the second quarter, after climbing 0.9 percent in the first quarter.

**Chart K-1**  
**Kalamazoo Indexes**  
**by Quarter - First of 1982 to Second of 1988**  
(1982=100)



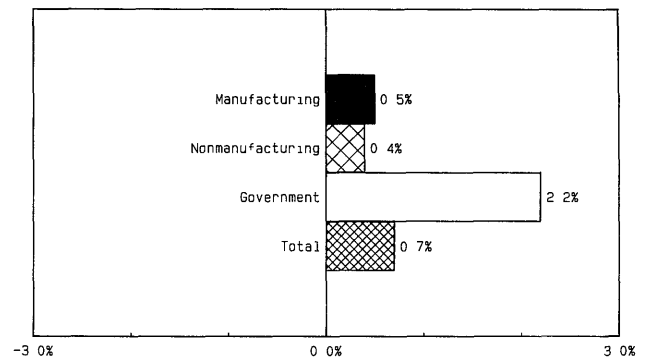
The area's unemployment rate fell to 4.3 percent in the second quarter and has fallen 1.1 percentage points over the past year. For the last four quarters, the area's unemployment rate has been below that of the nation; it should remain so for at least the next six months.

Both the area's Index of Leading Indicators and Index of Help-Wanted Advertising increased sharply in the second quarter, suggesting that continued employment growth can be expected in both the manufacturing and nonmanufacturing sectors in the coming months.

All three local components of the Index of Leading Indicators improved, pushing the Index up 4.6 percent.

Average weekly hours of production workers rose 1.9 percent; the number of initial claims for unemployment insurance plunged 13.4 percent; and the number of new dwelling units put under contract climbed 7.5 percent.

**Chart K-2**  
**Kalamazoo Employment**  
**Percentage Change, Second Quarter 1988**



SOURCE: Based on Michigan Employment Security Commission data. Seasonally adjusted by the Institute.

The area's Index of Help-Wanted Advertising rose a healthy 8.6 percent in the second quarter, on top of a slight 0.4 percent increase in the first quarter.

After waiting over 2.5 years, the Upjohn Company has received final approval from the Federal Drug Administration for sale of its anti-baldness drug, Rogaine. The drug should be available across the nation in four to six weeks; it is currently being sold in about 40 countries.

Upjohn also announced that it will spend \$21.1 million on a 31,000 square foot plant which will manufacture a chemical to boost milk production in cattle. The new plant will be adjacent to its main manufacturing plant in Portage.

In other developments, the General Motors stamping plant in Comstock Township has called back an additional 138 hourly workers. Hourly workers at the plant now number 3,100. Finally, A.I.M. Enterprises announced construction plans for a \$6.4 million, 54,000 square foot office structure adjacent to the Kalamazoo County Airport.

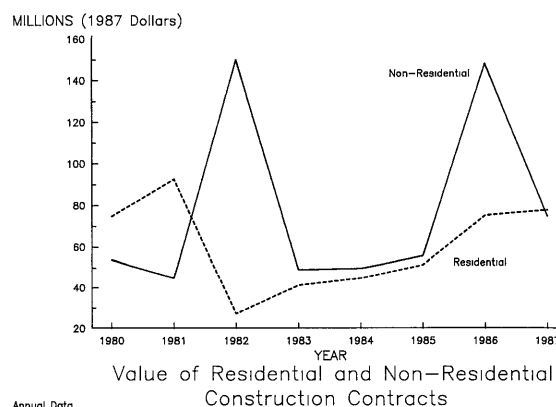
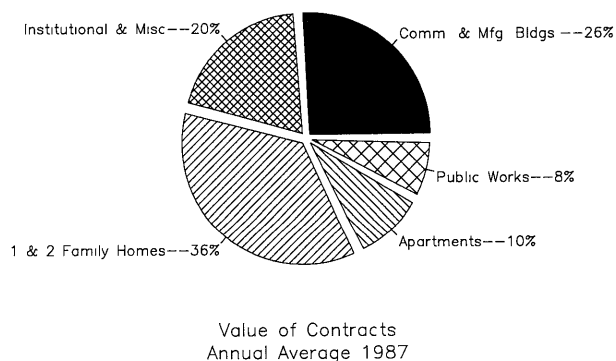
**Table K-1**  
**Kalamazoo (Kalamazoo County) Statistics**  
 (Adjusted for seasonal variations)

Measure	1988 second quarter	1988 first quarter	Percent change first to second	1987 second quarter	Percent change second to second
<b>Employment:</b>					
Manufacturing .....	30,020	29,880	0.5	29,100	3.2
Nonmanufacturing .....	58,530	58,310	0.4	57,970	1.0
Government .....	17,280	16,900	2.2	16,270	6.2
Total .....	105,830	105,090	0.7	103,340	2.4
<b>Unemployment:</b>					
Number unemployed .....	4,990	6,370	-21.7	6,160	-19.0
Unemployment rate .....	4.3	5.6	-1.3	5.4	-1.1
<b>Local indexes:</b>					
Help-wanted ads .....	290	267	8.6	264	9.8
Leading indicators .....	137	131	4.6	136	0.7
<b>Local components:</b>					
Average weekly hours ....	43.3	42.5	1.9	42.8	1.2
UI initial claims .....	285	329	-13.4	321	-11.2
New dwelling units <sup>a</sup> .....	1,154	1,074	7.5	1,459	-21.0

SOURCES: W. E. Upjohn Institute for Employment Research. Based on dwelling data from F.W. Dodge Division, McGraw Hill Information Systems Company, ad count from *Kalamazoo Gazette* and employment data from Michigan Employment Security Commission. National components in Table A-3.

a. New dwelling unit data are seasonally adjusted annual rates.

### Construction Activity



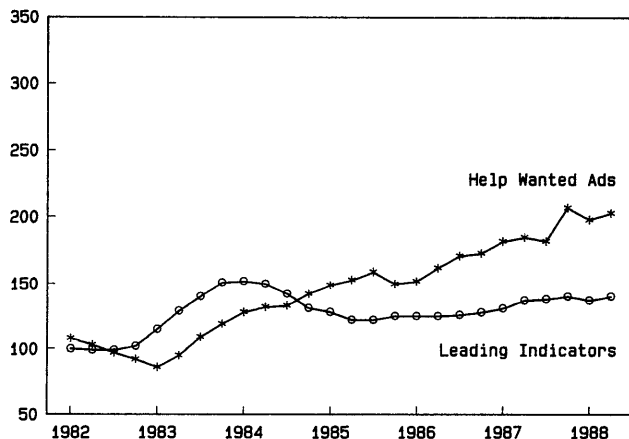
Values of nonresidential construction contracts peaked in 1982 and 1986 at over \$145 million. Omitting these boom years, there has been slow but steady growth from \$44 million in 1981 to \$74 million in 1987. The residential construction market, however, has yet to return to the 1981 peak of \$92 million, even though experiencing steady growth since 1982. In 1987 one- and two-family homes held the largest share of the construction market at 36 percent, followed by commercial and manufacturing at 26 percent. Institutional accounted for 20 percent, apartments 10 percent and public works 8 percent.

# The BUSINESS OUTLOOK for the MUSKEGON MSA

Total employment in the Muskegon MSA grew a scant 0.2 percent in the second quarter of 1988. We foresee improved employment growth in the coming months, not only in non-manufacturing, but in the area's troubled manufacturing sector as well.

Employment in nonmanufacturing rose 0.9 percent in the second quarter, after increasing just 0.1 percent in the previous quarter. Employment in manufacturing declined 0.7 percent in the second quarter, after falling 1.8 percent in the first. Over the past four quarters, manufacturing employment has dropped 2.9 percent. Government employment also fell 0.6 percent in the second quarter, following a slight 0.1 percent decline in the first quarter.

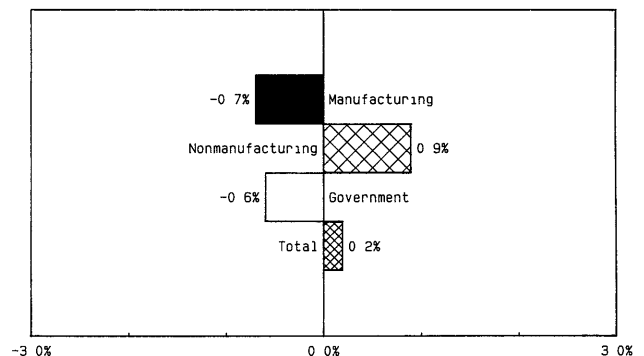
**Chart M-1**  
**Muskegon Indexes**  
**by Quarter - First of 1982 to Second of 1988**  
(1982=100)



Muskegon's unemployment rate dropped to 8.2 percent in the second quarter. The area's jobless rate has fallen 2.6 percentage points over the past year.

The Index of Leading Indicators for Muskegon rose 2.2 percent, offsetting the 2.9 percent decline it suffered in the previous quarter. All three local components of the Index improved modestly in the second quarter. Average weekly hours of production workers rose 0.5 percent, after falling 2.0 percent in the previous quarter. The number of initial claims for unemployment insurance declined 1.5 percent, and the number of new dwelling units put under contract rose 1.0 percent.

**Chart M-2**  
**Muskegon Employment**  
**Percentage Change, Second Quarter 1988**



SOURCE: Based on Michigan Employment Security Commission data. Seasonally adjusted by the Institute.

The area's Index of Help-Wanted Advertising rose 2.5 percent in the second quarter and has climbed 9.7 percent over the past year.

The modest improvements in both of the area's Indexes suggest that employment growth should improve moderately in both manufacturing and nonmanufacturing in the coming months.

Three companies in Muskegon County, Brunswick Bowling and Billiards Corp., SPX (formerly Sealed Power), and First of America Bank, are among 10 West Michigan firms that have contributed \$10,000 each in an effort to establish a foreign trade zone. The \$100,000 in private contributions will be added to \$30,000 already budgeted by the county governments of Muskegon, Ottawa, and Kent to fund the planning for the zone. The location of the foreign trade zone will be split among the three counties and is anticipated to include the Muskegon County Airport and port facilities on Muskegon Lake.

In a free trade zone, duties and tariffs are not applied to products shipped into the zones or manufactured in the zone until they are "exported" out. The advantage of the zone results because of substantial differences in tariffs currently existing on imported primary or intermediate goods and those on finished goods.

The second phase of the Michigan Department of Commerce's study of the Muskegon area has been released and provides an in-depth study of the area's competitive advantages and disadvantages. First, the authors conducted a comparative analysis of nearly 400 area industries and, through a screening procedure, identified those industries that have found the area advantageous. Second, the report carefully scrutinized the area's resources, labor force, and other factors affecting the area's business climate in

order to determine its comparative advantages and disadvantages.

The in-depth analysis yields many important findings, including that the area's workforce is underrepresented in professional and managerial occupations; its location on the shores of Lake Michigan provides opportunities for tourism, but limits market area; and its labor-management relations have improved, although old perceptions still prevail.

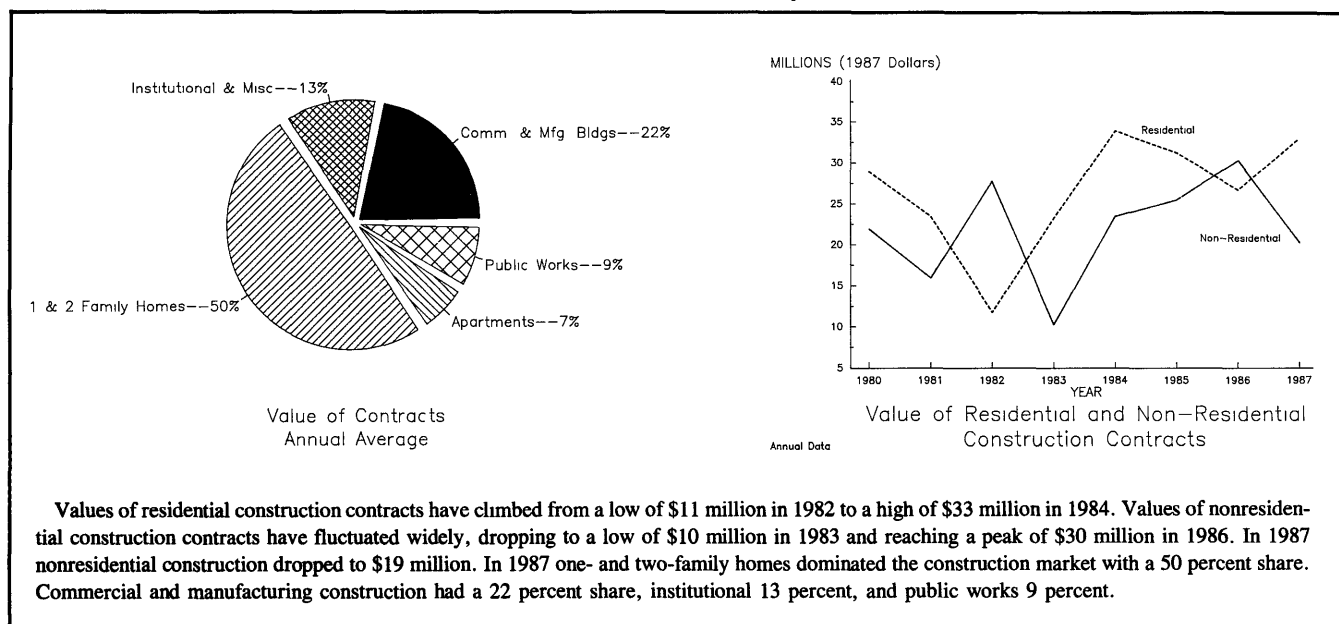
**Table M-1**  
**Muskegon (Muskegon County) Statistics**  
(Adjusted for seasonal variations)

Measure	1988 second quarter	1988 first quarter	Percent change first to second	1987 second quarter	Percent change second to second
<b>Employment:</b>					
Manufacturing .....	17,220	17,350	-0.7	17,730	-2.9
Nonmanufacturing .....	30,370	30,090	0.9	29,520	2.9
Government .....	9,030	9,080	-0.6	8,650	4.4
Total .....	56,620	56,520	0.2	55,900	1.3
<b>Unemployment:</b>					
Number unemployed .....	5,530	6,530	-15.3	7,340	-24.7
Unemployment rate .....	8.2	9.9	-1.7	10.8	-2.6
<b>Local indexes:</b>					
Help-wanted ads .....	203	198	2.5	185	9.7
Leading indicators .....	140	137	2.2	138	1.4
<b>Local components:</b>					
Average weekly hours ....	40.7	40.5	0.5	40.8	-0.2
UI initial claims .....	327	332	-1.5	351	-6.8
New dwelling units <sup>a</sup> .....	432	428	1.0	429	0.8

SOURCES: W. E. Upjohn Institute for Employment Research. Based on dwelling data from F.W. Dodge Division, McGraw Hill Information Systems Company, ad count from *Muskegon Chronicle* and employment data from Michigan Employment Security Commission. National components in Table A-3.

a. New dwelling unit data are seasonally adjusted annual rates.

### Construction Activity



## Definitions of terms as used in this quarterly

**Business Cycle Turning Dates:** The historical business cycle turning dates used in this report are those designated by the National Bureau of Economic Research, Inc. (NBER). They mark the approximate dates when, according to NBER, aggregate economic activity reached its cyclical high (peak) or low (trough) levels.

**Central City:** An incorporated city or urbanized area defined by the U.S. Office of Management and Budget as having the largest population in the metropolitan statistical area in 1980. For an additional city to be included in the name of an MSA, the employment/residence ratio must be at least 0.75, with out-commuting of less than 60 percent of that city's resident employed workers.

**Employment:** In this quarterly, "employment" is used instead of the more precise term, "wage and salary employment." The MESC employment data shown refer to "jobs by place of work," or nonagricultural employment.

**Manufacturing:** The estimate of the number of workers on the payrolls of privately owned firms engaged in the production of durable or nondurable goods.

**Nonmanufacturing:** The estimate of the number of workers on the payrolls of privately owned firms that provide services rather than goods. (Construction and mining are included.)

**Government:** The estimate of the number of workers on national, state, or local governmental payrolls.

**Historical data:** Monthly, quarterly, or yearly information for past periods. (Shown in appendix tables.)

**Index of Leading Indicators, State & MSAs:** A (composite) index with seven components (see Tables A-2 and A-3).

**Index of Leading Indicators, United States:** A (composite) index based on 11 major components made up of 60 series. Marginal employment adjustment measures include average weekly hours in manufacturing employment and average weekly initial UI claims. One of the two job vacancy series is Help-Wanted Advertising. New private housing units are part of the fixed capital investment component. For a complete list see *Business Conditions Digest* and the 1984 *Handbook of Cyclical Indicators*, The U.S. Department of Commerce, Bureau of Economic Analysis.

**Initial Claims:** A count of the number of new claims filed for unemployment insurance (UI) for regular state programs. Each initial claim filed indicates a new spell of unemployment for an experienced worker. In Michigan, to be eligible for benefits, an individual must have earned wages of at least 30 times the state minimum hourly wage (currently \$3.35) during not less than 20 of the 52 consecutive calendar weeks preceding the benefit year. Each such week is

termed a "credit week." An individual may qualify with as few as 14 credit weeks, however, if base period wages have been in excess of 20 times the state average weekly wage (currently \$433.91).

**Michigan Employment Security Commission (MESC):** Michigan Employment Security Commission is a state agency that administers the Job Service and the state/federal unemployment insurance programs and provides labor market information in keeping with state and federal reporting requirements.

**MSA (1983 definition):** In all but New England, one or more counties are defined as a Metropolitan Statistical Area if they contain the following: a large population nucleus (a central city or "urbanized" area) with adjacent communities which have a high degree of economic and social integration. Adjacent counties are included if they have 60 persons per square mile, and/or substantial 1970 to 1980 population growth (20 percent) with 10 percent residing within the urbanized area and a commuting pattern with 15-20 percent of residents working within the central city or urbanized area.

MSAs are also defined as **major labor market areas** by the Michigan Employment Security Commission (MESC). Those labor market areas outside of the MSAs have the peninsula or county name.

**National Purchasing Management Selected Components Indexed:** The national association conducts a monthly survey of purchasing managers from a scientifically selected sample of firms across the nation. Responses indicate only the direction of change; the percentage reporting favorable changes minus those with unfavorable changes plus 100 equals the index as shown in this quarterly. For those familiar with diffusion indexes, these indexes represent two times the percentage reporting a change in a favorable direction, e.g., more new orders. (The favorable count includes one-half of those reporting no change.)

**Time Series:** A set of numbers covering a known interval or timespan (e.g., months or quarters) that provide information about a well-defined activity, process or group. For local series that consistently change direction in advance of overall economic activity, see Table A-3. Those measuring current or past economic activity are found in Table A-4.

**Unemployed:** The number of persons in the labor force who are without a job or on layoff but not expecting to be called back. In order to be counted, an individual must be seeking work.

**Vacancy Rate:** The percentage of all housing units in existing homes or newly constructed units (visibly ready for occupancy) that are empty and therefore unoccupied. Vacancy rates in Michigan MSAs are determined by U.S. Postal Service delivery workers as part of an annual survey conducted for the Federal Home Loan Bank of Indianapolis. See Table A-5.

**Table A-1**  
**Index of Help-Wanted Advertising (1982=100)**

Area	Annual averages (Selected years)						By quarter (Adjusted for seasonal variations)				
	1982	1983	1984	1985	1986	1987	II	1987 III	IV	1988 I	II
Battle Creek MSA.....	100	115	139	159	202	233	243	242	230	226	222
Benton Harbor MSA.....	100	109	126	186	222	273	283	302	262	289	318
Grand Rapids MSA.....	100	124	178	218	243	281	286	288	284	314	325
Kalamazoo MSA.....	100	117	166	202	231	263	270	271	264	267	290
Muskegon MSA.....	100	102	134	152	165	189	185	182	207	198	203
West Michigan, 4 MSAs <sup>a</sup> ....	100	118	164	198	225	259	264	264	264	277	285
West Michigan, 5 MSAs.....	100	118	162	198	225	260	266	268	265	278	290
Detroit, Michigan MSA.....	100	146	163	194	194	172	170	170	170	168	173
United States.....	100	111	152	160	161	196	187	179	213	215	222

SOURCES: West Michigan indexes based on ad counts from the *Battle Creek Enquirer*, *Benton Harbor Herald Palladium*, *Grand Rapids Press*, *Kalamazoo Gazette* and *Muskegon Chronicle*; United States and Detroit indexes derived from (1967=100) series of The Conference Board.

a. West Michigan Metropolitan Statistical Areas of Battle Creek, Grand Rapids, Kalamazoo and Muskegon.

**Table A-2**  
**Index of Leading Indicators (1982=100)**  
**(Rounded)**

Area	Annual averages (Selected years)						By quarter (Adjusted for seasonal variations)				
	1982	1983	1984	1985	1986	1987	II	1987 III	IV	1988 I	II
Battle Creek MSA.....	100	141	147	132	136	141	142	137	141	135	141
Benton Harbor MSA.....	100	133	137	117	124	133	132	135	134	132	135
Grand Rapids MSA.....	100	127	133	127	131	141	144	141	146	142	141
Kalamazoo MSA.....	100	125	131	123	124	133	137	131	134	131	137
Muskegon MSA.....	100	134	144	125	126	137	137	138	140	137	140
West Michigan, 4 MSAs <sup>a</sup> ....	100	127	134	127	130	140	143	139	143	139	141
West Michigan, 5 MSAs.....	100	130	138	131	134	146	148	145	149	145	145
Michigan.....	100	131	141	137	143	153	151	152	154	147	156

SOURCES: National index from U.S. Department of Commerce, all others from the W.E. Upjohn Institute.

a. West Michigan Metropolitan Statistical Areas of Battle Creek, Grand Rapids, Kalamazoo and Muskegon.

### Technical Note

As presently constituted, the components and the range of weights used in the Indexes of Leading Indicators are as follows:

1. *Average weekly hours of production workers in manufacturing.* A separate series is used for each metropolitan area and for the State of Michigan. Weights range from .32 to .47.

2. *Initial claims for unemployment insurance (inverted).* A separate series is used for each metropolitan area and for the State of Michigan. Weights range from .08 to .12.

3. *New dwelling units put under contract (4-term trailing average).* A separate series is used for each metropolitan area and for the State of Michigan. Weights range from .03 to .11.

In addition, each area's index includes the following national measures:

4. *The proportion of firms reporting an increase in new orders.* Weights range from .09 to .12.

5. *The proportion of firms reporting an increase in purchased materials prices.* Weights range from .10 to .14.

6. *The proportion of firms reporting an increase in purchased material inventories.* Weights range from .08 to .12.

7. *The proportion of firms reporting a change in vendor performance (slower delivery time).* Weights range from .08 to .13.

**Table A-3**  
**Components of the Index of Leading Indicators**

<b>1. Average Weekly Hours of Production Workers</b>											
<b>Area</b>	<b>Annual averages (Selected years)</b>						<b>By quarter (Adjusted for seasonal variations)</b>				
	<b>1980</b>	<b>1983</b>	<b>1984</b>	<b>1985</b>	<b>1986</b>	<b>1987</b>	<b>1987</b>				
							<b>II</b>	<b>III</b>	<b>IV</b>	<b>I</b>	<b>II</b>
Battle Creek MSA.....	41.3	42.0	42.7	41.8	41.9	43.3	42.8	43.0	43.9	42.3	41.8
Benton Harbor MSA.....	39.9	42.1	42.3	39.7	41.0	40.8	39.6	43.1	40.0	41.2	41.4
Grand Rapids MSA.....	39.9	41.2	41.7	41.0	40.7	40.1	39.7	39.7	40.5	40.7	41.6
Kalamazoo MSA.....	40.4	42.0	42.4	43.1	43.1	42.9	42.8	42.9	42.9	42.5	43.3
Muskegon MSA.....	41.4	41.1	42.0	40.4	40.4	40.9	40.7	40.8	41.2	40.5	40.7
West Michigan, 4 MSAs <sup>b</sup> ....	40.3	41.5	42.0	41.4	41.2	41.0	40.7	40.7	41.3	41.2	41.9
West Michigan, 5 MSAs.....	40.3	41.5	42.0	41.2	41.2	41.0	40.5	40.9	41.2	41.2	41.8
Michigan.....	40.1	42.5	43.2	43.1	42.6	42.2	42.1	41.5	42.4	42.3	43.6
United States.....	39.7	40.1	40.7	40.5	40.7	40.9	40.8	41.0	41.0	41.0	41.1
<b>2. Initial Claims for Unemployment Insurance (Average per week)</b>											
<b>Area</b>	<b>Annual averages (Selected years)</b>						<b>By quarter (Adjusted for seasonal variations)</b>				
	<b>1980</b>	<b>1983</b>	<b>1984</b>	<b>1985</b>	<b>1986</b>	<b>1987</b>	<b>1987</b>				
							<b>II</b>	<b>III</b>	<b>IV</b>	<b>I</b>	<b>II</b>
Battle Creek MSA.....	689	348	347	299	304	313	313	342	310	352	306
Benton Harbor MSA.....	366	220	201	237	259	236	236	243	224	253	260
Grand Rapids MSA.....	1,504	1,323	1,068	1,147	1,152	1,019	967	1,043	967	1,101	1,060
Kalamazoo MSA.....	599	415	299	308	329	336	322	378	307	329	285
Muskegon MSA.....	658	332	283	389	397	351	361	334	322	332	327
West Michigan, 4 MSAs <sup>b</sup> ....	3,451	2,417	1,998	2,144	2,181	2,021	1,963	2,109	1,911	2,108	1,987
West Michigan, 5 MSAs.....	3,817	2,637	2,198	2,381	2,440	2,257	2,199	2,351	2,134	2,351	2,255
Michigan.....	37,942	21,135	16,407	15,624	17,765	17,020	18,309	16,704	15,967	18,785	16,505
United States.....	483,180	440,170	376,050	394,260	372,650	325,640	336,210	319,210	296,090	313,550	292,380
<b>3. New Dwelling Units - Put Under Contract</b>											
<b>Area</b>	<b>Annual averages (Selected years)</b>						<b>By quarter (Seasonally adjusted annual rate)</b>				
	<b>1980</b>	<b>1983</b>	<b>1984</b>	<b>1985</b>	<b>1986</b>	<b>1987</b>	<b>1987</b>				
							<b>II</b>	<b>III</b>	<b>IV</b>	<b>I</b>	<b>II</b>
Battle Creek MSA.....	219	360	432	223	257	181	194	156	160	152	186
Benton Harbor MSA.....	a	364	363	278	418	361	320	324	367	384	410
Grand Rapids MSA.....	3,121	2,815	3,268	4,569	4,963	5,564	4,821	5,484	6,150	6,082	5,094
Kalamazoo MSA.....	1,369	794	613	1,007	1,015	1,188	1,502	1,332	966	1,074	1,154
Muskegon MSA.....	500	329	415	410	393	416	435	408	413	428	432
West Michigan, 4 MSAs <sup>b</sup> ....	5,209	4,298	4,728	6,209	6,628	7,379	6,952	7,380	7,706	7,712	6,995
West Michigan, 5 MSAs.....	a	4,662	5,091	6,487	7,046	7,756	7,272	7,704	8,304	8,320	7,303
Michigan.....	33,113	25,909	32,220	39,269	47,601	51,374	48,660	48,648	40,474	44,496	49,108
<b>4. National Purchasing Management Survey (Selected components indexed)<sup>c</sup></b>											
<b>Component</b>	<b>Annual averages (Selected years)</b>						<b>By quarter (Adjusted for seasonal variations)</b>				
	<b>1980</b>	<b>1983</b>	<b>1984</b>	<b>1985</b>	<b>1986</b>	<b>1987</b>	<b>1987</b>				
							<b>II</b>	<b>III</b>	<b>IV</b>	<b>I</b>	<b>II</b>
4. New orders.....	91	128	115	105	112	123	123	126	123	117	119
5. Change in inventories.....	83	95	103	88	89	97	97	95	100	94	100
6. Vendor performance.....	81	113	115	96	101	91	106	82	75	76	77
7. Changes in material prices..	147	121	123	91	103	143	139	153	158	158	163

SOURCES: Average weekly hours and initial claims based on information from Michigan Employment Security Commission; number of housing units put under contract, F.W. Dodge Division, McGraw Hill Information Systems Company; survey data from the National Association of Purchasing Management. Seasonal adjustment by the Institute.

a. Not available.

b. West Michigan Metropolitan Statistical Areas of Battle Creek, Grand Rapids, Kalamazoo and Muskegon.

c. Survey results shown here are based on percent reporting conditions favorable to economic growth minus percent reporting conditions unfavorable to economic growth plus 100.



**Table A-4**  
**Employment Data for West Michigan MSAs and Michigan**  
(Thousands of jobs - by place of work)

<b>Total Employment<sup>a</sup></b>											
<b>Labor market area</b>	<b>Annual averages (Selected years)</b>						<b>By quarter (Adjusted for seasonal variations)</b>				
	1980	1983	1984	1985	1986	1987					
							II	1987 III	IV	1988 I	II
Battle Creek MSA.....	55.2	50.9	53.0	54.2	55.0	56.1	55.8	56.2	56.6	57.4	57.7
Benton Harbor MSA.....	60.8	55.5	57.8	59.0	62.0	63.3	62.8	63.5	64.2	64.2	64.4
Grand Rapids MSA.....	266.1	266.6	283.2	293.4	300.3	306.0	304.3	306.0	311.6	317.5	321.2
Kalamazoo MSA.....	95.6	92.1	94.8	97.2	101.3	103.7	103.5	103.8	104.2	105.1	105.8
Muskegon MSA.....	56.4	50.4	53.7	55.2	56.2	56.0	55.9	56.4	56.7	56.5	56.6
West Michigan:											
4 MSAs <sup>b</sup> .....	473.3	460.0	484.6	500.1	505.8	521.9	519.8	522.3	529.2	536.5	541.6
5 MSAs.....	534.1	515.5	542.4	559.1	574.7	585.1	582.4	585.8	593.4	601.0	606.0
Michigan.....	3,442.8	3,223.1	3,381.0	3,505.3	3,639.3	3,798.1	3,688.6	3,679.8	3,724.0	3,722.6	3,746.9
<b>Private Manufacturing Employment</b>											
<b>Labor market area</b>	<b>Annual averages (Selected years)</b>						<b>By quarter (Adjusted for seasonal variations)</b>				
	1980	1983	1984	1985	1986	1987					
							II	1987 III	IV	1988 I	II
Battle Creek MSA.....	18.0	14.3	14.8	14.9	15.0	15.5	15.4	15.7	15.5	15.3	15.3
Benton Harbor MSA.....	21.5	19.2	20.0	20.5	21.5	21.3	21.1	21.3	21.5	21.4	21.1
Grand Rapids MSA.....	89.0	86.8	95.1	99.0	94.5	94.2	93.6	93.8	95.6	97.0	98.0
Kalamazoo MSA.....	28.5	27.1	28.3	29.1	29.2	29.2	29.1	28.7	29.6	29.9	30.0
Muskegon MSA.....	19.7	16.6	18.7	19.4	18.1	17.7	17.7	17.9	17.6	17.3	17.2
West Michigan:											
4 MSAs <sup>b</sup> .....	155.2	144.7	156.9	162.3	156.8	156.6	155.8	156.1	158.5	159.6	160.5
5 MSAs.....	176.7	163.9	176.9	182.8	178.3	177.9	177.0	177.3	179.6	181.1	181.6
Michigan.....	998.9	880.5	962.8	984.3	998.2	966.7	973.6	950.9	959.1	930.8	934.1
<b>Private Nonmanufacturing Employment</b>											
<b>Labor market area</b>	<b>Annual averages (Selected years)</b>						<b>By quarter (Adjusted for seasonal variations)</b>				
	1980	1983	1984	1985	1986	1987					
							II	1987 III	IV	1988 I	II
Battle Creek MSA.....	27.2	25.8	26.9	27.9	28.6	29.1	28.9	28.9	29.7	30.6	30.9
Benton Harbor MSA.....	30.4	28.5	29.8	30.5	32.1	33.5	33.1	33.7	34.2	34.3	34.8
Grand Rapids MSA.....	144.5	151.2	159.4	165.0	175.2	180.7	179.7	181.2	184.5	189.2	191.7
Kalamazoo MSA.....	50.3	49.8	51.4	52.6	56.1	58.0	58.1	58.6	57.7	58.3	58.5
Muskegon MSA.....	27.3	25.7	27.1	28.3	29.3	29.7	29.6	29.7	30.0	30.1	30.4
West Michigan:											
4 MSAs <sup>b</sup> .....	249.4	252.5	264.8	273.7	289.2	297.5	296.2	298.3	302.1	308.2	311.7
5 MSAs.....	279.7	281.0	294.5	304.2	321.3	330.9	329.3	332.1	336.3	342.6	346.5
Michigan.....	1,816.1	1,772.8	1,851.3	1,941.3	2,044.5	2,114.5	2,095.2	2,123.7	2,148.5	2,167.7	2,187.3
<b>Government Employment</b>											
<b>Labor market area</b>	<b>Annual averages (Selected years)</b>						<b>By quarter (Adjusted for seasonal variations)</b>				
	1980	1983	1984	1985	1986	1987					
							II	1987 III	IV	1988 I	II
Battle Creek MSA.....	10.1	10.8	11.3	11.5	11.4	11.5	11.5	11.5	11.5	11.4	11.5
Benton Harbor MSA.....	9.0	7.9	8.0	8.1	8.5	8.5	8.5	8.5	8.5	8.5	8.5
Grand Rapids MSA.....	32.3	28.5	28.7	29.4	30.6	31.1	30.9	31.0	31.6	31.4	31.5
Kalamazoo MSA.....	16.8	15.2	15.1	15.6	16.0	16.5	16.3	16.5	16.7	16.9	17.3
Muskegon MSA.....	9.4	8.1	7.9	7.6	8.7	8.8	8.7	8.8	9.1	9.1	9.0
West Michigan:											
4 MSAs <sup>b</sup> .....	68.6	62.7	63.0	64.0	66.6	67.9	67.4	67.9	68.9	68.8	69.4
5 MSAs.....	77.6	70.5	70.9	72.1	75.1	76.4	76.0	76.4	77.5	77.3	77.9
Michigan.....	627.8	570.0	567.2	579.8	596.6	606.3	604.9	605.1	618.7	624.1	625.6

SOURCE: Michigan Employment Security Commission. Seasonal adjustments by the Institute.

a. Detail may not add to totals because of rounding.

b. West Michigan Metropolitan Statistical Areas of Battle Creek, Grand Rapids, Kalamazoo and Muskegon.

**Table A-5**  
**Vacancy Rates for Selected Metropolitan Statistical Areas (MSAs) in Michigan**

MSA	End date of survey	Total existing housing units				
		All types	Single family	Single family attached	Multi-family	Mobile home
Ann Arbor .....	03/16/88	3.1	1.1	4.6	5.8	3.5
Battle Creek .....	10/08/87	3.2	2.1	8.4	8.3	3.1
Benton Harbor .....	04/05/88	2.8	2.1	3.8	4.8	7.1
Detroit .....	01/17/88	2.2	1.5	4.4	4.5	1.6
Flint .....	02/19/88	3.5	2.6	4.0	7.0	4.9
Grand Rapids .....	03/15/88	2.5	1.4	4.3	6.0	1.7
Jackson .....	05/12/88	2.6	1.8	4.6	6.1	1.8
Kalamazoo .....	02/19/88	3.3	2.0	7.3	5.7	5.7
Lansing .....	10/10/87	2.6	2.0	3.1	4.2	2.9
Muskegon .....	05/14/88	2.4	2.0	13.6	2.7	1.5
Saginaw-Bay City-Midland .....	11/17/86	2.5	2.1	3.8	4.3	2.8

MSA	End date of survey	Existing housing units plus units under construction				
		All types	Single family	Single family attached	Multi-family	Mobile home
Ann Arbor .....	03/16/88	4.7	1.7	8.3	8.4	n.a.
Battle Creek .....	10/08/87	3.4	2.2	8.6	8.7	n.a.
Benton Harbor .....	04/05/88	3.2	2.3	5.9	5.9	n.a.
Detroit .....	01/17/87	3.1	1.9	6.4	7.0	n.a.
Flint .....	02/19/88	3.7	2.7	5.8	7.2	n.a.
Grand Rapids .....	03/15/88	3.4	1.9	6.0	8.5	n.a.
Jackson .....	05/12/88	3.4	1.9	5.2	10.5	n.a.
Kalamazoo .....	02/19/88	4.0	2.2	7.4	7.7	n.a.
Lansing .....	10/10/87	3.2	2.5	3.6	5.4	n.a.
Muskegon .....	05/14/88	2.7	2.3	14.1	3.1	n.a.
Saginaw-Bay City-Midland .....	11/17/86	2.7	2.2	4.1	4.8	n.a.

SOURCE: Federal Home Loan Bank of Indianapolis.

NOTE: Vacancy rates for United States are not strictly comparable. In 1987 vacancy rates published by U.S. Department of Commerce show rental housing vacancy rates for second, third, fourth and first quarters of 1987/88 at 7.5, 8.1, 7.5, and 8.0 percent. Homeowner housing vacancy rates for same periods were 1.7, 1.7, 1.6 and 1.6 percent.

**Table A-6**  
**Population by Sex and Age**  
**Michigan and Five Metro Areas in West Michigan**

Area		Percent Distribution						
		Males	Females	0-14	15-19	20-34	35-64	Over 64
Michigan .....	1985	48.8	51.2	22.6	8.5	26.4	31.9	10.6
	1980	48.8	51.2	24.0	9.7	26.0	30.5	9.8
Metropolitan (MSAs):								
Battle Creek .....	1985	48.5	51.5	22.6	7.9	24.5	33.1	11.9
	1980	48.5	51.5	23.3	9.4	24.0	32.0	11.3
Benton Harbor .....	1985	47.9	52.1	23.4	8.3	23.7	32.6	12.0
	1980	48.3	51.7	24.8	9.6	23.7	31.0	10.9
Grand Rapids .....	1985	48.6	51.4	23.9	8.2	28.2	29.9	9.8
	1980	48.5	51.5	24.4	10.1	27.0	28.7	9.8
Kalamazoo .....	1985	48.8	51.2	21.2	8.9	31.0	29.9	9.0
	1980	48.4	51.6	21.6	10.5	30.6	28.4	8.9
Muskegon .....	1985	48.5	51.5	23.7	8.2	25.3	31.2	11.6
	1980	48.4	51.6	24.5	10.0	24.3	30.5	10.7

SOURCE: Michigan Department of Management and Budget, Office of Revenue and Tax Analysis.

**Table A-7**  
**Average Residential Contract Mortgage Rates in Michigan**

Year	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.
1982....	17.30	17.47	17.40	17.49	17.43	17.37	17.29	17.15	16.24	15.83	14.72	14.28
1983.....	13.94	13.71	13.54	12.96	12.90	12.81	13.12	13.48	14.31	14.28	14.17	14.16
1984.....	14.11	13.77	13.79	14.10	14.37	15.02	15.15	14.99	14.84	14.75	14.25	14.19
1985.....	14.05	13.77	13.88	13.84	13.73	12.94	12.72	12.80	12.66	12.69	12.58	12.13
1986....	11.46	11.46	10.92	10.81	10.79	11.19	11.24	11.12	10.90	10.84	10.73	10.49
1987....	10.25	9.97	9.92	10.06	11.04	11.36	11.01	10.83	11.18	11.50	11.20	11.10
1988.....	11.05	10.52	10.45	10.53	10.73	10.99	10.87	...	...	...	...	...

SOURCE: Business Information Division, Federal Home Loan Bank of Indianapolis.

NOTE: The contract rate shown is for 75 percent loan-to-value ratio, 25-year maturity loans on new single family homes. Alternative plans that allow mortgage rates to be adjusted, varied, blended, or shared can be arranged at lower rates.

**Table A-8**  
**Consumer Price Index**

Consumer Price Index (CPI), U.S. City Average (1982-84=100)													
Year	Annual Avg.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
CPI for All Urban Consumers (CPI-U)													
1980	82.4	77.8	78.9	80.1	81.0	81.8	82.7	82.7	83.3	84.0	84.8	85.5	86.3
1981	90.9	87.0	87.9	88.5	89.1	89.8	90.6	91.6	92.3	93.2	93.4	93.7	94.0
1982	96.5	94.3	94.6	94.5	94.9	95.8	97.0	97.5	97.7	97.9	98.2	98.0	97.6
1983	99.6	97.8	97.9	97.9	98.6	99.2	99.5	99.9	100.2	100.7	101.0	101.2	101.3
1984	103.9	101.9	102.4	102.6	103.1	103.4	103.7	104.1	104.5	105.0	105.3	105.3	105.3
1985	107.6	105.5	106.0	106.4	106.9	107.3	107.6	107.8	108.0	108.3	108.7	109.0	109.3
1986	109.6	109.6	109.3	108.8	108.6	108.9	109.5	109.5	109.7	110.2	110.3	110.4	110.5
1987	113.6	111.2	111.6	112.1	112.7	113.1	113.5	113.8	114.4	115.0	115.3	115.4	115.4
1988	...	115.7	116.0	116.5	117.1	117.5	118.0	118.5	...	...	...	...	...
CPI for Urban Wage Earners and Clerical Workers (CPI-W)													
1980	82.9	78.3	79.4	80.5	81.4	82.3	83.2	83.3	83.8	84.6	85.3	86.1	86.9
1981	91.4	87.5	88.5	89.0	89.6	90.3	91.1	92.2	92.8	93.7	93.9	94.1	94.4
1982	96.9	94.7	95.0	94.8	95.2	96.2	97.4	98.0	98.2	98.3	98.6	98.4	98.0
1983	99.8	98.1	98.1	98.4	99.0	99.5	99.8	100.1	100.5	101.0	101.2	101.2	101.2
1984	103.3	101.6	101.8	101.8	102.1	102.5	102.8	103.2	104.2	104.8	104.8	104.7	104.8
1985	106.9	104.9	105.4	105.9	106.3	106.7	107.0	107.1	107.3	107.6	107.9	108.3	108.6
1986	108.6	108.9	108.5	107.9	107.6	107.9	108.4	108.4	108.6	109.1	109.1	109.2	109.3
1987	112.5	110.0	110.5	111.0	111.6	111.9	112.4	112.7	113.3	113.8	114.1	114.3	114.2
1988	...	114.5	114.7	115.1	115.7	116.2	116.7	117.2	...	...	...	...	...

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor.

NOTES: Monthly data are shown above unadjusted for seasonal variations. Unadjusted CPI data are used extensively for escalation purposes. Although the CPI is often called the "Cost-of-Living Index," it measures only price change, which is just one of several important factors affecting living costs. All CPI series are linked historically to the original CPI Index for Urban Wage Earners and Clerical Workers.

These series contain no revision but are reprinted for the convenience of the user.

PERCENT CHANGE: Movements of these indexes from one time period to another are usually expressed as percent changes rather than changes in index points. Index point changes are affected by the level of the index in relation to its base period while percent changes are not. Examples of computation follow:

$$100 \times \frac{108.6 \text{ (1986 annual avg.)} - 106.9 \text{ (1985 annual avg.)}}{106.9 \text{ (1985 annual avg.)}} = 1.6\% \text{ change 1985 to 1986, CPI-W.}$$

$$100 \times \frac{109.3 \text{ (1986 December)} - 108.6 \text{ (1985 December)}}{108.6 \text{ (1985 December)}} = 0.6\% \text{ change December 1985 to December 1986, CPI-W.}$$

$$100 \times \frac{110.0 \text{ (1987 January)} - 109.3 \text{ (1986 December)}}{109.3 \text{ (1986 December)}} = 0.6\% \text{ change December 1986 CPI-W to January 1987, CPI-W.}$$

**Table A-9**  
**Selected Labor Market Indicators**  
 (Not adjusted for seasonal variations)

Area	Average for manufacturing production workers <sup>a</sup> March 1988			Civilian labor force unemployment rate <sup>b</sup>	
	Weekly hours	Hourly earnings	Weekly earnings	March 1987	June 1988
United States.....	41.1	\$10.16	\$417.6	5.5	5.5
Michigan.....	43.8	13.51	591.7	8.6	7.1
West Michigan MSAs:					
Battle Creek.....	42.0	14.39	604.4	9.0	7.2
Benton Harbor.....	41.8	9.82	410.4	7.4	6.3
Grand Rapids.....	41.6	11.33	471.3	5.8	5.2
Kalamazoo.....	43.4	12.40	538.2	5.1	4.4
Muskegon.....	40.8	12.07	492.5	9.7	8.7
Other MSAs:					
Ann Arbor.....	44.7	14.87	692.9	4.4	3.7
Detroit.....	43.6	14.49	655.0	8.3	7.3
Flint.....	42.7	16.53	724.0	15.2	14.6
Jackson.....	41.8	10.03	417.3	7.7	6.7
Lansing-E. Lansing.....	43.7	15.50	675.8	7.2	5.5
Saginaw-Bay City-Midland.....	43.0	15.26	673.0	9.3	6.7
Other Areas:					
Upper Peninsula.....	41.6	10.02	425.9	11.8	7.1

SOURCES: U.S. Department of Labor and the Michigan Employment Security Commission (MESC) (most recent benchmark).

a. Preliminary. Earnings include overtime and part-time wages.

b. Seasonally adjusted rate for U.S. was 5.6 percent in March 1988 and 5.4 percent in June 1988. Seasonally adjusted rate for Michigan was 8.2 in March 1988 and 6.9 percent in June 1988.

**Table A-10**  
**Commercial Banking Data**  
**First Quarter 1988**  
 (In thousands of current dollars)

	Metropolitan (MSAs)					Nonmetropolitan
	Battle Creek	Benton Harbor	Grand Rapids	Kalamazoo	Muskegon	(7 counties)
Total deposits.....	\$213,260	\$986,143	\$4,804,531	\$1,543,604	\$719,498	\$ 906,970
Total transaction accounts <sup>a</sup> .....	74,215	263,426	1,264,780	459,135	185,963	222,852
Nontransaction savings <sup>b</sup> .....	82,554	270,445	1,491,571	572,751	244,847	309,988
Time deposits < \$100,000.....	47,239	361,861	1,379,450	437,989	234,181	311,999
Time deposits > \$100,000 <sup>c</sup> .....	9,252	90,415	668,730	73,729	46,439	66,968
Total assets.....	237,389	1,095,913	5,869,017	1,840,784	804,266	1,025,547
Total loans.....	107,487	705,517	3,692,714	1,152,944	403,071	584,084
Agriculture.....	564	13,019	57,682	25,994	1,039	30,345
Business.....	41,088	167,317	1,343,868	303,756	96,981	89,197
Consumer.....	19,637	155,110	835,740	246,812	92,693	182,808
Government.....	1,081	17,728	167,582	101,293	16,788	13,429
Real estate.....	42,359	347,112	1,270,857	450,888	191,471	258,006
Other <sup>d</sup> .....	2,758	5,231	16,985	24,201	4,099	10,299

SOURCE: Federal Reserve Bank of Chicago.

a. Total transaction accounts include demand deposits, automated teller accounts, and NOW accounts.

b. Nontransaction savings include money market depository accounts (MMDA) and IRAs.

c. This category includes both time certificates and open-time certificates over \$100,000.

d. Includes loans made to depository institutions, leases, and bankers acceptances, and unearned income. The seven nonmetropolitan counties are: Allegan, Barry, Cass, Newaygo, Oceana, St. Joseph, and Van Buren.

**Table A-11**  
**Population and Income Update for Selected Areas**

Area	Population				Per Capita Income			
	1986*	1980	Change	% change	1985	1979	% change current dollars	% change constant dollars
Michigan .....	9,155,000	9,262,078	(107,078)	-1.2	10,902	7,688	41.8	-4.3
Southwest Michigan.....	1,697,500	1,646,402	51,098	3.1	10,004	7,072	41.5	-4.6
Metropolitan (MSAs)								
6-county total.....	1,325,500	1,284,480	41,020	3.2	10,300	7,240	42.3	-4.0
Battle Creek MSA.....	136,900	141,557	(4,657)	-3.3	9,986	7,211	38.5	-6.6
Battle Creek.....	54,080	56,339	(2,259)	-4.0	10,548	7,504	40.6	-5.2
Benton Harbor MSA.....	163,600	171,276	(7,676)	-4.5	9,365	6,728	39.2	-6.1
Benton Harbor.....	14,160	14,707	(547)	-3.7	5,514	3,766	46.4	-1.2
Benton Township.....	17,690	19,120	(1,430)	-7.5	7,901	5,430	45.5	-1.8
Kalamazoo MSA.....	217,700	212,378	5,322	2.5	11,245	7,769	44.7	-2.3
Kalamazoo .....	77,230	79,722	(2,492)	-3.1	10,068	6,945	45.0	-2.2
Portage .....	40,430	38,157	2,273	6.0	12,811	8,733	46.7	-1.0
Grand Rapids MSA.....	648,800	601,680	47,120	7.8	10,640	7,437	43.1	-3.5
Kent County.....	477,500	444,506	32,994	7.4	10,727	7,522	42.6	-3.8
Grand Rapids.....	186,530	181,843	4,687	2.6	9,625	6,691	43.8	-2.9
Kentwood .....	35,750	30,438	5,312	17.5	11,691	8,145	43.5	-3.1
Wyoming .....	62,420	59,616	2,804	4.7	10,327	7,452	38.6	-6.5
Ottawa County.....	171,300	157,174	14,126	9.0	10,397	7,198	44.4	-2.5
Holland.....	24,070	21,767	2,303	10.6	10,536	7,145	47.5	-0.5
Muskegon MSA.....	158,500	157,589	911	0.6	8,848	6,358	39.2	-6.1
Muskegon .....	39,810	40,823	(1,013)	-2.5	7,827	5,507	42.1	-4.1
Muskegon Heights.....	14,610	14,611	(1)	-0.0	6,569	4,583	43.3	-3.3
Norton Shores.....	21,710	22,025	(315)	-1.4	11,588	8,211	41.1	-4.8
Nonmetropolitan								
7-county total.....	372,000	361,922	10,078	2.8	8,950	6,476	38.2	-6.7
Allegan.....	86,600	81,555	5,045	6.2	9,346	6,744	38.6	-6.5
Barry .....	47,800	45,781	2,019	4.4	9,752	6,965	40.0	-5.5
Branch .....	39,500	40,188	(688)	-1.7	8,591	6,449	33.2	-10.1
Cass .....	48,500	49,499	(999)	-2.0	8,833	6,481	36.3	-8.0
Oceana .....	22,700	22,002	698	3.2	7,479	5,627	32.9	-10.3
St. Joseph.....	59,600	56,083	3,517	6.3	9,183	6,473	41.9	-4.3
Van Buren.....	67,300	66,814	486	0.7	8,453	6,108	38.4	-6.6

SOURCES: State of Michigan Department of Management and Budget and U.S. Bureau of the Census, 1986 County Estimates.

NOTE: Battle Creek MSA is Calhoun County; Benton Harbor MSA is Berrien County; Kalamazoo MSA is Kalamazoo County; and Muskegon MSA is Muskegon County.

\*1986 population figures are revised estimates.

**Table A-12**  
**West Michigan (4 MSAs) Statistics<sup>a</sup>**  
(Adjusted for seasonal variations)

Measure	1988 second quarter	1988 first quarter	Percent change first to second	1987 second quarter	Percent change second to second
<b>Employment:</b>					
Manufacturing .....	160,480	159,600	0.6	155,870	3.0
Nonmanufacturing .....	311,740	308,170	1.2	295,570	5.5
Government .....	69,350	68,750	0.9	67,370	2.9
Total .....	541,570	536,520	0.9	518,810	4.4
<b>Unemployment:</b>					
Number unemployed .....	32,100	40,830	-21.4	40,520	-20.8
Unemployment rate .....	5.4	6.9	-1.6	7.0	-1.7
<b>Local indexes:</b>					
Help-wanted ads .....	285	277	2.9	258	10.5
Leading indicators .....	141	139	1.4	142	-0.7
<b>Local components:</b>					
Average weekly hours ....	41.9	41.2	1.7	40.7	2.9
UI initial claims .....	1,987	2,108	-5.7	1,952	1.8
New dwelling units <sup>b</sup> .....	6,955	7,712	-9.8	8,160	-14.8

SOURCES: W.E. Upjohn Institute for Employment Research. Based on dwelling data from F.W. Dodge Division, McGraw Hill Information Systems Company, ad counts from five daily newspapers and employment data from Michigan Employment Security Commission. National components in Table A-3.

a. The four West Michigan Metropolitan Statistical Areas are Battle Creek, Grand Rapids, Kalamazoo and Muskegon.

b. New dwelling unit data are seasonally adjusted annual rates.

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